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SOAP

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Lavender

ALL GRADES
OIL LAVENDER
FLOWER

SOAPS
INSECTICIDES
DISINFECTANTS
CHEMICAL SPECIALTIES
SANITARY SUPPLIES
POLISHES
CLEANERS

LD-70 2 144190

C[illegible] placed for UNGERER Oil
[illegible] will assure the pur-
[illegible]ser [illegible] the [illegible]ick of the harvest.
[illegible]ticip[illegible]te a larger crop, and
pr[illegible]s w[illegible] he in keeping.

157

UNGERER & CO.
13-15 WEST 20th STREET · NEW YORK

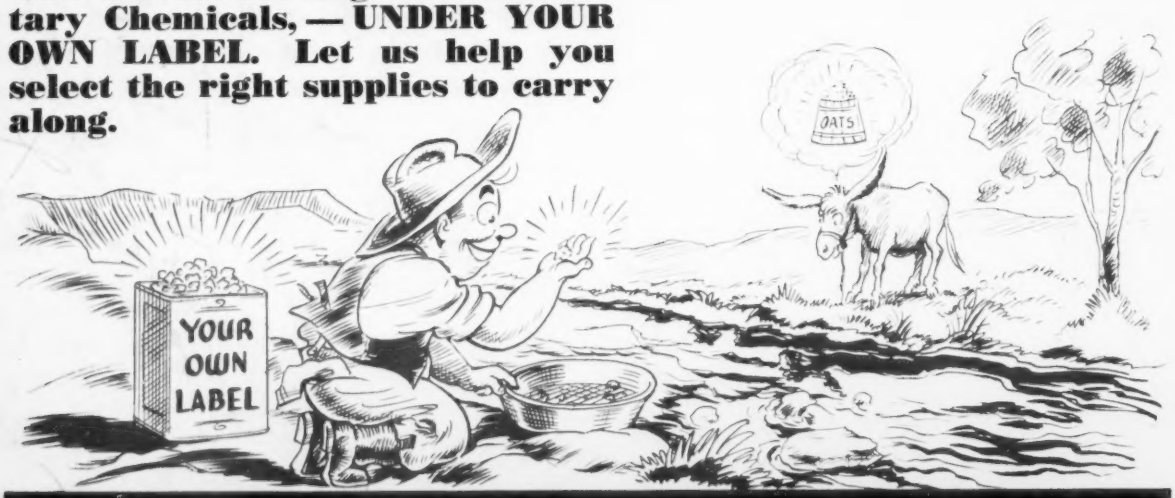
USDA
LIB

This new heavy wax cream emulsion for furniture puts on more polish and puts off repolishing for weeks.

A Lucky "Thirty-Sixer"

Makes the "Pay-dirt" Pan Out

Fuld "thirty - sixers" find that all dirt is pay-dirt when they go after it with the Fuld complete line. Prospect this season with America's fastest moving line of Sanitary Chemicals, — UNDER YOUR OWN LABEL. Let us help you select the right supplies to carry along.



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LIQUID CLEANERS
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- Liquid Scrubbing Compound
- Sassafras Scrub Soap
- Floor Bleach
- Rug Shampoo

INSECTICIDES
- Roach Powders
- Fly Sprays
- Cattle Sprays
- Pyrethrum Sprays
- Moth Spray
- Rat Exterminators
- Sprays for Special Purpose Concentrates

FLOOR WAXES and SEALS
- Self-Polishing Wax
- Liquid Wax
- Wood Seal
- Gym Seal
- Terrazzo Seal
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- Urinal Strainers
- Wall Containers
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- Scouring Compounds
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LIQUID DEODORANTS
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- Forma Chloro Sprays
- Theatre Sprays
- Pine Deodorant
- Drip Machine Fluid

LIQUID and BASE SOAPS
- Liquid Hand Soaps (All percentages 10 to 40%)
- Shampoos
- Cocoanut Oil Base Soaps

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- Jelly Soaps

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- Auto Polish
- Furniture Cream
- Furniture Polish
- Floor Oil
- Silver Pastes and Creams

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- Boiler Compounds

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- Urinal Blocks
- Deodorant Blocks 2 to 40 oz. sizes
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BALTIMORE. MARYLAND

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- METHYL SALICYLATE U. S. P.
  (OIL OF WINTERGREEN SYNTHETIC)
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- CRESYLIC ACID
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  (PARADICHLORBENZENE)
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» USE these Monsanto products with confidence. They have proven their ability to produce consistently superior and economical results. We recommend their applicability in your formulae.

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THAT SELLS ME
SOAP
EVERY TIME!
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REG. U.S. PAT. OFF.
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Quality Aromatics
to meet every need of the
Soap Manufacturer
E. I. DU PONT DE NEMOURS & CO., INC.
ORGANIC CHEMICALS DEPARTMENT
FINE CHEMICALS DIVISION
WILMINGTON, DELAWARE

SOAP

Volume XII
Number 7

July, 1936

MEMBER AUDIT BUREAU OF CIRCULATIONS

SANITARY Products Section, which is included as a department of every issue of SOAP, begins on page 75. Production Section begins on page 63.

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254 WEST 31st STREET NEW YORK, N. Y.

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containing YARMOR 302

are recommended for the removal of oil and grease from garage, machine shop, and factory floors. They are made for heavy work.

Their light sudsing property is a great advantage, because a slippery soap film is not left after cleaning.

☆ We supply **Yarmor 302 Steam-distilled Pine Oil** to manufacturers of powder scrubbing soaps.

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Company _____

Street _____

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UP then go

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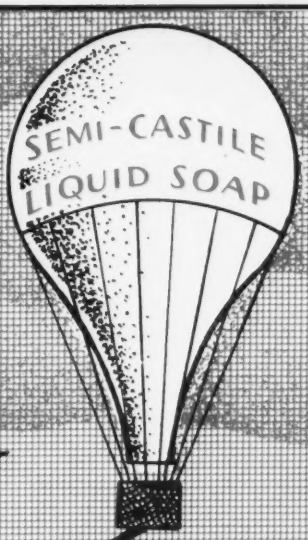

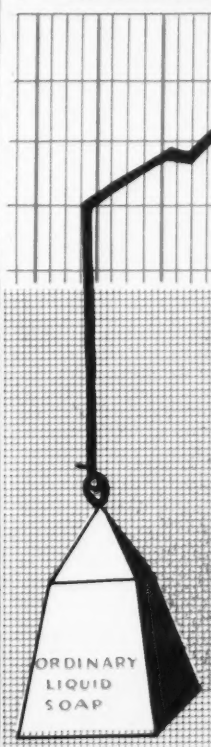

Ordinary liquid Soap leaves something to be desired.

That is why it is an uphill battle for jobbers to increase their sales . . . unless they handle SEMI-CASTILE, which is DIFFERENT!

Being made of half OLIVE OIL, it is surprisingly gentle on the hands. Its smoothness and creamy lather will be a revelation to your customers. Repeat orders are the rule. Your sales are BOUND to rise!

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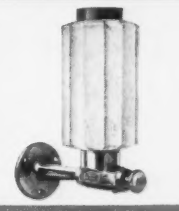

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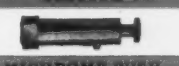

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- ☐ DISPENSERS
- ☐ RUB-NO WAX
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- ☐ WALL CONTAINERS
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- ☐ MOPPING VARNISH
- ☐ DISINFECTANTS
- ☐ FURNITURE CREAM
- ☐ INSECT KILLER
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HYDROXY CITRONELLAL DYMETHYL ACETAL

• A remarkable chemical that replaces HYDROXY CITRONELLAL IN ALL ITS USES

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Boiling for 3 hours with concentrated caustic soda does not give any trace of alteration.

Make Your Own Test

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2—Harmless to the skin.

3—Recommended for Soaps, Powders, Creams, Beauty Washes, Lotions.

4—Resistance to action of Alkalis.

Compared with HYDROXYCITRONELLAL

1—Hydroxycitronellal oxidizes rapidly.

2—Hydroxycitronellal is very irritating.

3—Hydroxycitronellal spread on the skin causes burning sensation.

4—Hydroxycitronellal almost destroyed by Alkalis.

Samples promptly sent on request

DAUFIXIOL

the *Perfect* Soap FIXATIVE

Special DAUFIXIOL Qualities

1—Sweet, constant odor.

2—Very soluble in Alcohol.

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4—Resistant to alkalis.

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6—No irritating or harmful action.

Without Reaction on the Most Diverse Substances

The fixative that does a smooth job, is dependable and uniform in quality and very reasonable in price.

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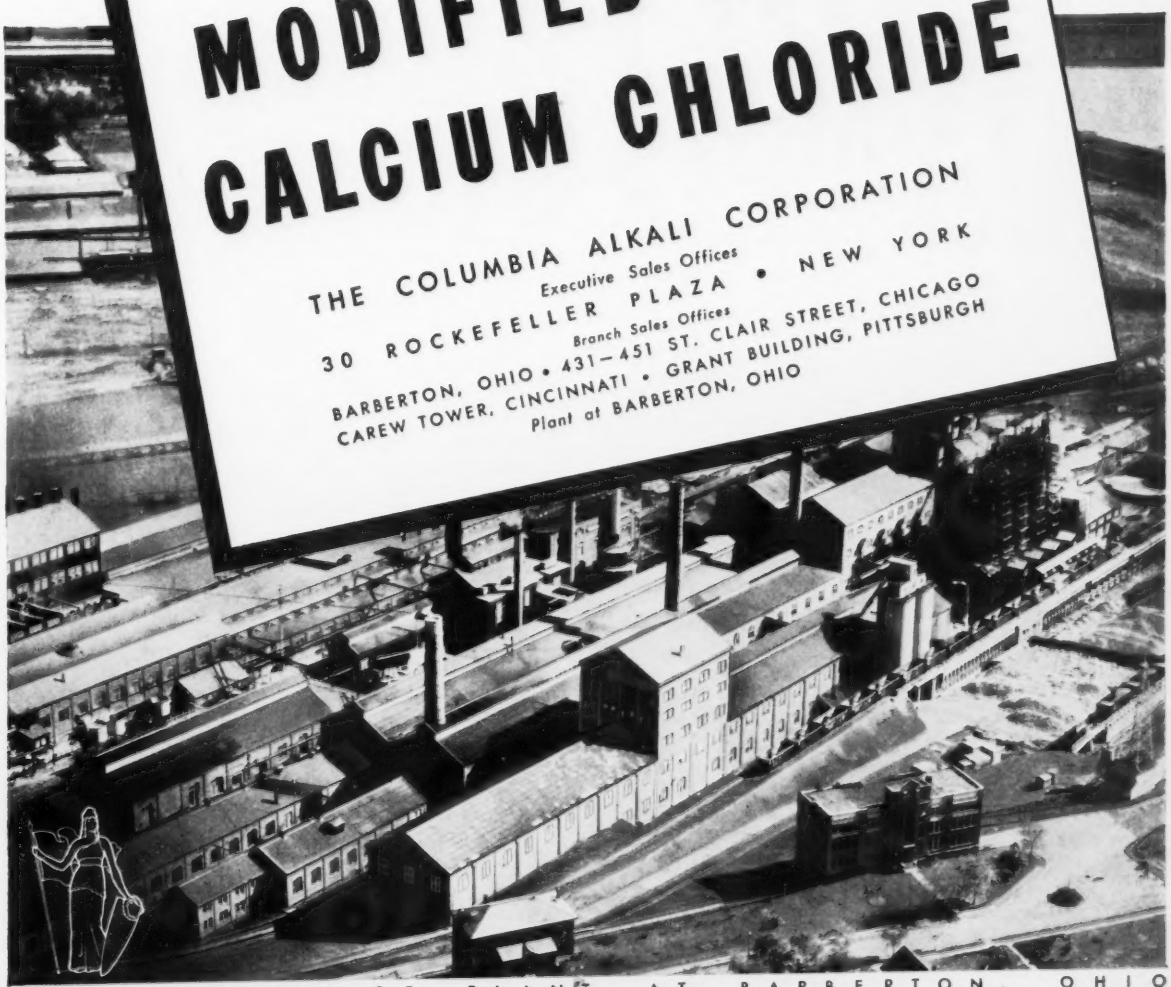
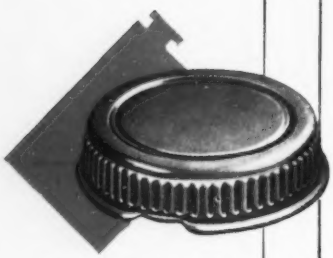
Plant at BARBERTON, OHIO

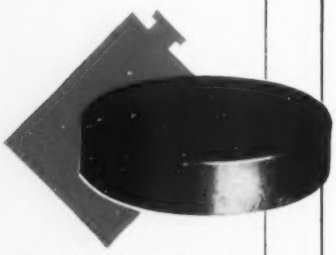


AERIAL VIEW OF PLANT AT BARBERTON, OHIO

GIVE LIQUIDS IN CANS A break



The Anchor Amerseal Cap, the same closure as used by the hundreds of millions for sealing glass packages, applied or removed with a quarter turn.



The Anchor Beacon Cap with smooth, unbroken outside surfaces; uses the identical sealing principle.

For instantaneous and easy opening, for better pouring control, for more perfect sealing—and resealing—use the modern method of sealing liquids in cans . . . by equipping them with Anchor Amerseal Can Nozzles and Caps. People who buy liquids packed in cans, whether ordinary householders or skilled craftsmen, have the same reactions about packaging. One of the finest ways to keep them friendly and enthusiastic about your products is to provide them with these easy opening, easy pouring devices. Your users will appreciate the advantages of the Anchor Amerseal Nozzle and Cap just as millions of the general public do in the case of glass-packed products using this same sealing principle.

These nozzles and caps protect the contents better. Liquids won't dry out. Oily or volatile products cannot escape. The cap makes a tight, secure contact with the smooth top of the nozzle—yet it releases with a flip of the fingers—a quarter turn. Where desired, Amerseal Nozzles can be equipped with tamper-proof discs.

Cans equipped with Anchor Amerseal Nozzles and Caps are suitable for oils of all kinds, liquid polishes and waxes, alcohols, drugs and chemicals, cleaning compounds, shellacs, varnishes and other specialties. The two styles of caps adaptable to these can nozzles are shown to the right, supplied in colors or lithographed decoration if desired. Write us for our descriptive folder describing these closures and the Amerseal Nozzle in detail. Anchor Cap & Closure Corporation, Long Island City, New York; Toronto, Canada. *Branch offices in all principal cities.*

Caps by ANCHOR

WILL THESE *Fit* YOUR NEEDS?

LET's use the word "fit" in both its meanings. First off, are containers like those above with their wide mouths and gently sloping shoulders fitted, i.e., suitable for your products? They are for many drugs, chemicals and specialties, both dry and liquid. But if not, remember that Salem has hundreds of other styles for every sort of product and purpose.

Secondly, when one speaks of "fit," one usually thinks of the sealing of the container and of the finish that makes possible a tight fit and dependable sealing results. All Salem ware is uniform and accurate in finish, well within the maximum and minimum standards set up by Glass Container Association specifications. Accuracy of finish is one of the things that characterizes Salem containers—along with brilliance, cleanness, color and strength—one of the important qualities that indicate Salem's care in manufacture as well as experience and skill in glass-making. SALEM GLASS WORKS, Salem, New Jersey. *Associated with* CAPSTAN GLASS COMPANY, Connellsville, Pennsylvania. *Branch offices in all principal cities.*

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Clear, water-white solution. Easy to use. No sludge or sediment. Meets every quality requirement—100% efficient.

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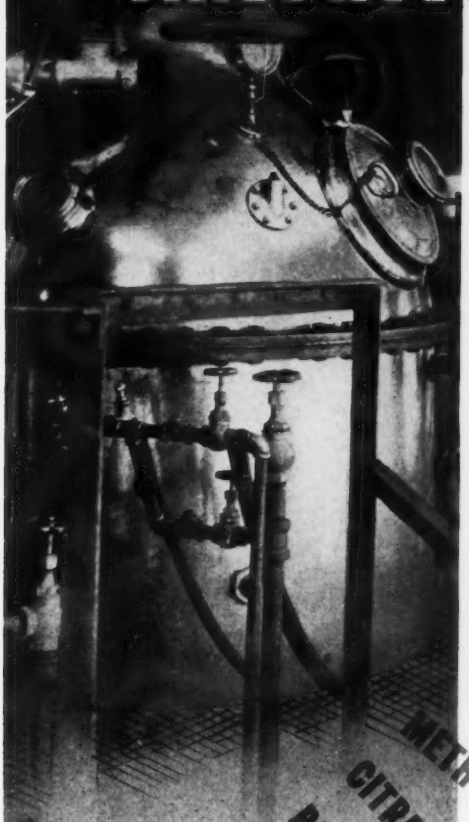

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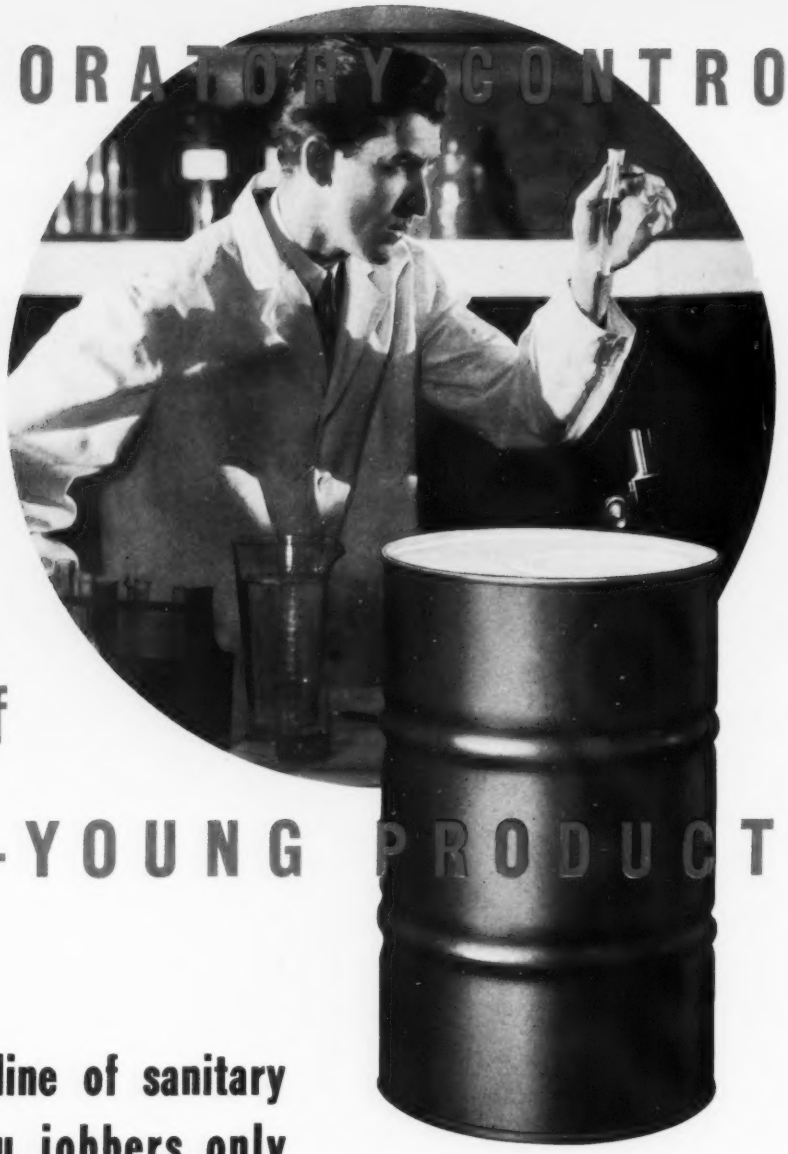

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NOW a complete line of sanitary supplies sold thru jobbers only

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THE DAVIES-YOUNG SOAP CO.
DAYTON, OHIO

NOT ONLY BECAUSE IT WAS FIRST

There are many buyers of Caustic Potash who use Niagara's product because Niagara was the first to produce it in America. But *not only* because it was first. We do not hold customers or get new ones for that reason. Our business has grown and is still growing because Niagara Caustic Potash is the standard measure of quality and uniformity . . . and because Niagara has head-start experience in giving efficient service and expert technical cooperation. Your production will benefit by these Niagara advantages.

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Niagara

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ESSENTIAL OILS
SYNTHETIC AROMATICS
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For the Soap and Insecticide Industries

For 138 Years

we have supplied the soap industry with our products--our high standard quality has retained for us the friendship of many discriminating users of items in our line--you cannot afford to ignore this when buying

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FALCON DEODORANT BLOCS

FALCON BLOCKETTES

FALCON PERFUMED CRYSTALS

ONE WHIFF . . .

is better than a thousand words

Into your customer's hands, put a Falcon Bloc . . . ask him to smell it. Then, as he breaks the Cellophane wrapper and catches the full fragrance, watch him smile.

Such pleasing fragrance comes only from the finest perfumes. Add to this our original process of molding cold, under tons of pressure, and you have the reasons why Falcon Deodorants always give unfailing deodorization and fragrance.

Begin now to sell Falcon Deodorants. They cost no more than the ordinary kind. And once your customers use Falcon, they'll never be satisfied with any other.

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. . . in any field
Bright armor in days of old protected the knight and marked his qualities of leadership and rank. • Today...containers by "national" help arm your product against the field of competition...widen dealer and consumer interest...force your product into sales action.
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A TRULY worthwhile toilet soap, shampoo or spray deserves something above the ordinary in a perfume. For years Roure-Bertrand Fils and Justin Dupont have been developing specialties, both natural and synthetic, that have lifted innumerable finished products out of the ordinary. This creative ability is working for you in 1936 as in the years before.

Our own extensive perfume laboratory works closely with the Roure-Bertrand and Dupont laboratories abroad. Experience gained through the years with Europe's perfume industry, coupled with a definite knowledge of American requirements, combine to produce the ultimate in perfume odors for any purpose. A wide range of modern perfumes is available, priced to suit almost any requirement. For example:

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Dahlia	105	Orchid	105
Gardenia	105	Rosenone	105
Jasmin	105	Tuberose	105

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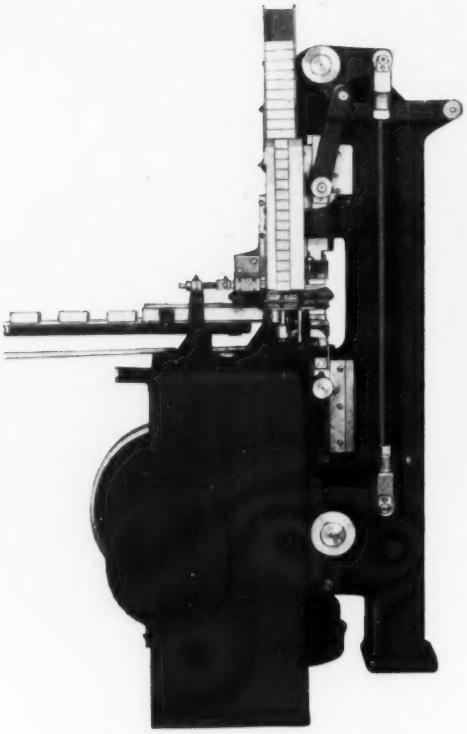
819 Santee Street

It would pay you to use

JONES TOGGLE PRESSES

THE LONGER SOAP CAKES, EITHER TOILET OR LAUNDRY, ARE UNDER PRESSURE THE BETTER THEIR FINISH.

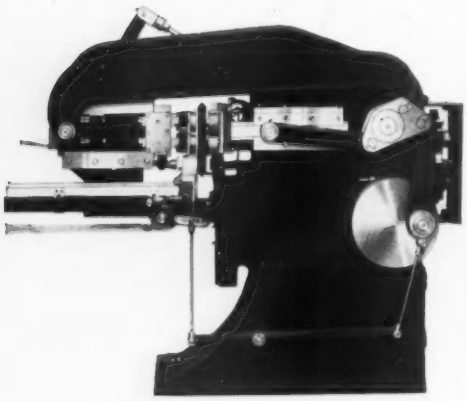


Type ET Toilet Soap Press

ALL NEW TYPES OF

JONES PRESSES

ARE TOGGLE OPERATED AND HOLD THE SOAP UNDER PRESSURE TWICE AS LONG AS EARLIER MODELS.



Type K Laundry Soap Press

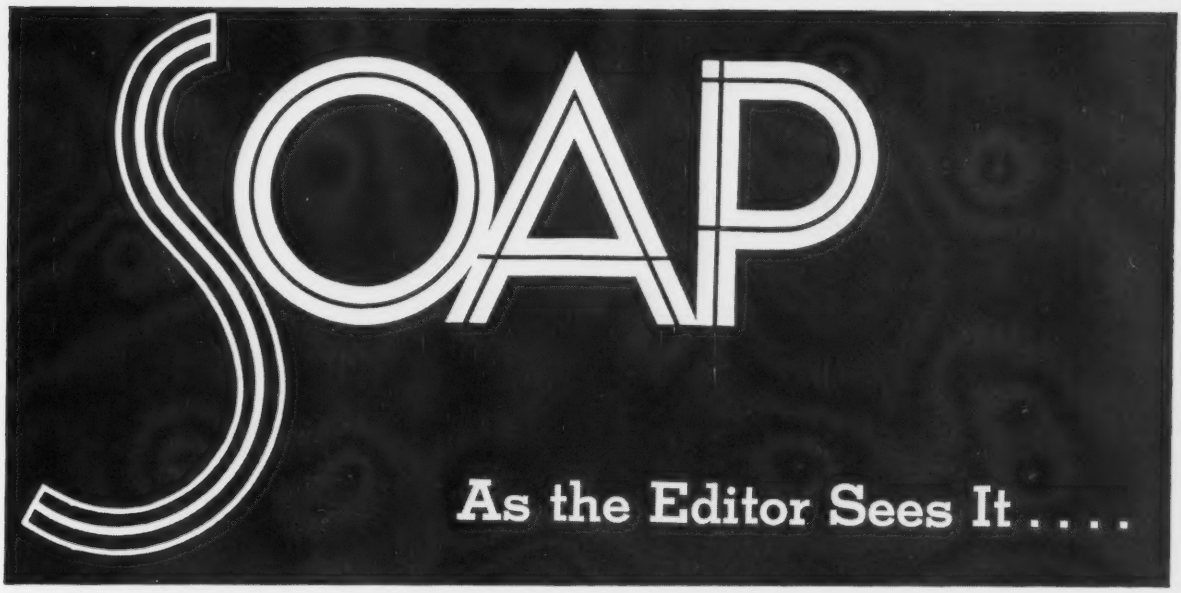
MANY SOAP MAKERS ARE REPLACING EARLIER MODELS WITH THEM BECAUSE OF THEIR FAR BETTER PRESSING, GREATER PRODUCTION, ECONOMY IN DIE WEAR AND, LAST BUT NOT LEAST, BECAUSE THEY OPERATE

WITHOUT NOISE OR VIBRATION

R. A. JONES & COMPANY, Inc.

P. O. BOX 485 CINCINNATI, OHIO

The Standardized *Constant Motion Cartoner* packages bottles, jars, tins, collapsible tubes and many other articles. It feeds, folds, and inserts direction sheets and corrugated board liners with the loads



CONGRESS has completed building its fence of high raw material taxes around the American soap kettle. Before adjournment last month, it took time to O.K. the Bailey Amendment to the revenue bill which will add materially to soap makers' raw material costs and send them looking further in every direction for new low-priced fats. When the original excise tax was adopted two years ago, several loopholes were left open, but these have been closed now by the added imposts of the Bailey Amendment. Imports of tallow will now pay a full 3 cents excise tax in addition to the one-half cent import duty previously imposed. Whale oil, fish oils, and various fatty acids will also pay a 3-cent tax. This apparently means that the imports of tallow into the American market over the past two years are at least temporarily at an end. It seems to mean too that the consumption of fish and whale oils by the American soap industry, which last year showed a gain of 40,000,000 lbs., will drop once more to lower levels. Meanwhile inedible olive oil and olive foots maintain their favored untaxed status as soap raw materials.

IN THE body of the amended law covering taxes on imported oils, fats, and fatty acids, following the naming of the various fats and oils, there appears the phrase, ". . . fatty acids derived from any of the foregoing, and *salts* of any of the foregoing." Of course, the salts of fatty acids are soaps. However, this tax quite obviously is not intended to protect the American soaper with a three-cent blanket tax on imported soaps for a processing tax on finished soaps is without point. One object, it seems, is to prevent circumventing the fatty acid tax by bringing in the acids in the form of lime soaps and splitting them off after importation. Another, possibly, is to discourage the importation of bulk soap, made abroad from tax-free oil, for subsequent manufacture here into finished soaps. So there is nothing in this act to give the soaper any compensating protection against foreign soaps. This inclusion of "salts of the foregoing" is solely to plug up further possible loopholes in the structure of taxes on imported fats.

THE extension of processing taxes on oils and fats will probably bring a decline in the quality of American soaps over the next few years. The effects of the coconut, palm, and other taxes of the past two years has been apparent in numerous directions. Inquiries which come to us bear witness to the fact that the main object of many soapers today is to cheapen their products so that they can sell them in competition and still make a profit. The rise in quality and the extended use of soaps generally which accompanied the era of low-priced fats a few years back, is going to be lost. Of course, we agree with the contention of the renderers and

oil producers that they have just as much right to stay in business and make a profit as the soapers. At the same time, we do not see that this justifies a penalty on the soap industry of a one-hundred per cent raw material tax. Soap prices will have to be raised materially or quality is going to suffer. We will undoubtedly see some of both,—but it is our guess that it will be mostly the latter.

A WELL-KNOWN soaper has offered to bet us a new hat that the price of tallow will cross eight cents between next January first and April first. In the interest of science and the rendering industry, we have accepted. He is not the only soaper who has very bullish views on the oil and fat markets some months ahead. Well, we either buy a hat or get one free. Time, as usual, will tell.

THE soap and allied industries never suspected that there were so many state legislatures. Although there are only forty-eight, some soapers are beginning to suspect that most states must have two or three or more legislative bodies. They base this suspicion on the manner in which the industry continues to be made a target for all kinds of state laws. Kentucky, Louisiana, West Virginia, and others keep the pot boiling. What a welcome relief some kind of a federal law would be after all this pecking and sniping from forty-eight different directions. And when we point out that the profit margin in soap manufacture has been whittled down to almost nothing, the legislators silently point to the list of salaries of soap industry executives published not so many moons ago. Maybe we could dig up a list of those whose salaries were not published and use it in refutation.

VARIOUS and sundry ways exist for securing publicity. One is to call the President names. If the names are bad enough, they will get in the papers. Another way is to predict the end of the world. This always gets a big play, and has as far back as we can remember. Another is to sit on the top of a flagpole for days and days, or to eat powdered glass with great gusto and relish,—in fact, almost anything just so long as it is off the beaten path. Say something or do something different and you immediately become news.

Thus we find, according to the United Press, that people who keep "reasonably dirty" during working hours are safer from skin diseases than those who are clean at all times. Dr. Carey P. McCord, who the U. P. says made this statement, also is reputed to have said that the dirt was a protection. So we guess that this idea of cleanliness and sanitation about which we have heard so much for years, is another case of science barking up the wrong tree.

In the light of this newer knowledge, we see in the use of soap and water a danger to health. We must rush to print with a new article on the "Menace of Cleanliness" before somebody beats us to it and grabs all the publicity. We must tell the medical profession what a mistake it has been making for many a year in its surgical technique,—warn them hereafter to get the patient good and dirty before operating, and for the surgeon to operate barehanded with plenty of grime under his nails so that the patient will be properly protected. And we must warn our friends to sell their soap company stocks in a hurry before the public realizes the danger of cleanliness, and the decline in soap sales sets in.

Although the good doctor may startle sanitary experts and arouse the ire of soapers, we know that his words will be received with cheers by the ten-year old male population of America, which youths have seemingly long suspected that there was something radically unscientific in the constant demands of adamant parents that they wash their hands and behind their ears.

BECAUSE labor represents 95 per cent of the cost of a cleaning or sanitation job, the best quality cleaning materials and tools which by their efficiency save labor, are unquestionably cheapest in the long run. This argument in the sale of better grade and higher priced janitor supplies is not new. It has been used on numerous occasions, but, in our estimation, it cannot be repeated too often. A saving of a small percentage in labor costs by using the right product for the purpose more than offsets the full cost of the material. If there is one argument which might eventually put low-grade materials off the market, this is it.

Ewing Galloway

Soap in the TANNERY

By PAUL I. SMITH
Nottingham, England

APPLICATION of soap in the leather industry depends on its characteristic emulsifying property. Thus soap is used to stabilize oil and water emulsions, or "fat-liquors" as they are known technically. In the manufacture of practically all classes of leather, certain fatty matters are required to lubricate the fibres and impart to the leather the necessary fullness, softness and suppleness. In the case of heavy leather, oil emulsions help to impart waterproofing properties, which are, of course, absolutely essential. For some classes of light leather, a prolonged treatment with fat emulsions is required in order to obtain a cloth like softness and a degree of elasticity sufficient to ensure the comfort and usefulness of gloving, clothing, and moccasin leathers. For all mineral tannages, the fat-liquoring process is of the greatest importance as it controls the feel and entire character of the leather. The one and two bath methods of chrome tanning universally adopted for many classes of leather, could never be of practical value unless they were linked up with processes of "stuffing" or fat-liquoring the skins with oil emulsions. It is not altogether the fat that renders chrome leather waterproof, but the soap which fixes the basic chromium salts by forming insoluble soaps.

Soaps suitable for use in fat-liquors must be neutral, or only faintly alkaline, contain a relatively large proportion of fatty acids, and be free from all fillers, such as chalk, marble dust, gelatine, etc. They must dissolve in water to form clear solutions with good lathering power. Both potash and soda soaps are used in the leather industry, but soft soaps with low titre are generally preferred for fat-liquoring. It has been found, as the result of considerable practical experience, that soaps having a high titre are liable to crystallize out in the finished leather in the form of white specks. If soda soaps are used they should contain no stearic acid,

as these have a tendency to separate out in the pores of the leather when made up into boot and shoe uppers. Eitner considers that oils containing tallow (such as neatsfoot oil, which is extensively used for processing glove leathers) are not only liable to cause a white efflorescence mentioned above, but to impart a disagreeable rancid smell to the finished leather.

Leather technologists state that soaps for use in the preparation of fat-liquors should be made by the cold saponification process, and in fact tanners are frequently advised to make their own soaps by this method. The advantage of the cold process is that the soap contains appreciable quantities of glycerin, which on account of its peculiar hygroscopic properties has a beneficial action on leather. Soaps containing rosins, or their fatty acids should not be used. The free fatty acids of rosin oils are most objectionable from the tanner's standpoint, as they soon oxidize and become resinous, thus imparting a "tacky" or "gummy" feeling to the leather. Saponified rosin oils are poor soaps and have very little emulsifying power. The presence of fillers in soaps is liable to cause trouble during the process of finishing leathers, and mineral salts, and organic adulterants, such as moss and gelatine are distinctly objectionable.

Really good quality soaps, like straight olive and castor oil soaps, are always in steady demand by tanners. The following analysis represents the requirements of a good olive oil soap intended for the leather industry.

Fatty Acids	70.5%
Free Alkali	0.3%
Water	19.8%
Soda (NaO combined)	8.0%
Inorganic Impurities	1.4%

In using castor oil and olive oil soaps, tanners generally use small quantities of the commercial oils as well. Thus Flemming, the American tanning authority, recommends the following fat-liquor for chrome tanned sheepskins intended for motor clothing:—

½ lb. castor oil soap, ¾ lb. castor oil (neat).

The above quantities, when thoroughly emulsified, make 12 gallons of warm liquor sufficient for 100 average skins. For vegetable tanned leathers he recommends the use of 10 per cent castor oil soap and 5 per cent neat oil on the weight of the dry leather.

Fig soaps are much used in the preparation of fat-liquors for heavier classes of leather. The old fig soap, not very readily obtainable today, was made from olive oils foots and owing to the relatively large amount of phytosterol in the soap, it bore a great resemblance to fig paste. At present time, cotton seed oil and tallow, not to mention common garbage greases, are quite frequently used to manufacture fig soap, and although a reasonably good commercial soap is obtained, the presence of high titre tallow is liable to cause trouble.

Good curd soaps are also in demand, and they are frequently used to form strong emulsions in conjunction with castor, olive or neatsfoot oil, also codliver oil and degras. At one time, mottled soaps, containing about 61 per cent fatty acids and 0.5 per cent free alkali, were favorites with tanners, but unfortunately, these soaps are so badly adulterated and made from such poor fats, that many tanners have long since given up using them. Flake soaps, such as textile flakes, find some application in the trade for the preparation of fat-liquors for chrome calf and light hides.

THE preparation of the fat-liquor is a difficult and laborious operation. Most tanners have a special emulsifying machine installed so that the solution is thoroughly mixed. A fairly common type consists of a large steel or copper jacketed pan fitted with a stirring mechanism of blades or vanes on a vertical shaft, propeller like. On starting the machine a vigorous agitating action commences, which is rendered effective by the holes drilled in the metal blades. Steam can be circulated round the pan and the mixture thus kept at a set temperature. There are various machines of the centrifugal pattern on the market, and some progressive tanners have installed the latest and most efficient colloid mills for the better preparation of their emulsions. It is just beginning to be realized that the stability and even penetrative powers of an oil in water emulsion depends to a very great extent on the mechanical means adopted in preparing it. Very often the stabilizer, generally soap, is expected to work miracles.

The following are typical fat-liquors used in the dressing of good quality chrome leathers:

1. Seven pounds of neatsfoot oil are heated to 160 deg. F., and three pounds of good potash soap dissolved in the least quantity of hot water added and the whole stirred well in the emulsifier. After allowing the oil and soap mixture to cool down to 100 deg. F., seven pounds of sulfonated oil, e.g., Turkey Red Oil, are added and the whole mixed for some hours. Four pounds of the above mixture dissolved in twelve gallons of hot or boiling water will fat-liquor one hundred pounds of leather.

2. Ten pounds of commercial codliver oil are mixed with ten pounds of potash soap and the whole boiled with live steam for an hour. The mass is then allowed to cool and afterwards boiled up with its own weight of water and then well agitated. After cooling it is ready for use. Six per cent on the shaved weight of the leather is about the right proportion of fat liquor for chrome goods.

3. Ten pounds of sulfonated sperm oil boiled with open steam jet with five pounds potash soap and ten gallons of water. Four per cent of fat liquor on the shaved weight of leather is generally recommended.

Sometimes, considerable quantities of soap are used, and in the manufacture of white washable leather intended for gloves, soap plays a most important part. For ten dozen average sheepskins tanned with formaldehyde according to Payne and Pullman's original recipe, the consistency of a suitable fat-liquor would be as follows:—

Ewing Galloway

The leather industry is a large user of various soaps, oils, and special emulsions. View in a modern tannery.

10 lbs. flour; 10 lbs. china clay; 12 lbs. best curd soap; 30 egg yolks.

The flour and clay are first made up into a paste with cold water, the soap dissolved in a minimum amount of boiling water is then slowly added and the mixture well agitated. When the liquor has cooled down to 120 deg. F., the eggs are added and the whole mixed until an even emulsion has been obtained. The above quantities will make twenty gallons of liquor.

NOT only are soaps used in the preparation of oil emulsions, but sometimes pure soap solutions are used alone for the purpose of fat-liquoring. Superfatted vegetable oil soaps, particularly castor oil soaps, are frequently used in the processing of light leathers. When soap solutions are used for fat-liquoring chrome tanned goods, great care must, however, be taken to see that all soluble chromium salts are removed, otherwise sticky and insoluble chrome soaps are formed which fill the pores of the leather and interfere with subsequent finishing processes.

A solution of soft soap has a decided solvent action on "bloom" or ellagic acid, and it is usually the custom to add a small quantity of soap to the warm water used in scouring light hides and kips. A suitable solution can be made by dissolving half a pound of soap in four gallons of water. A cheap chip soap may be used for the above purpose as it does not matter if the free alkali present exceeds 0.5 per cent. The scouring of hides is usually done by brushing the alkaline liquor well into the pores of the leather and afterwards rinsing it with plenty of cold water. The leather is finally slicked out with a steel or brass slicker, or by machine.

For lighter goods, such as East India Persians, soap is much used to remove dirt and natural grease present, and quite frequently the leather contains as much as 10-15 per cent free sesame oil added by Indian native tanners to give weight to the leather. This oil must be removed before the leather can be dyed, and the soap and small amount of free alkali emulsify the oil and thus effect its removal, as well as cleaning the leather generally. The amount of free alkali in soaps for scouring purposes should not exceed 1 per cent. If an excessive amount of alkali is present there is a danger of the tannins being stripped, and the leather rendered poor, empty and impoverished.

When solutions of soap are treated with salts of certain metals, the corresponding insoluble metallic soap is produced. These metallic soaps are soluble in turpentine and petroleum, and they find useful applications in the leather trade for waterproofing sole and heavy leather generally. A solution of alumina sulfate about 5-10 per cent is brushed over the surface of the leather, which is allowed to dry. After an interval of an hour or so, a solution of 10 per cent soft soap is brushed well into the pores of the leather, and the process repeated until the leather is absolutely waterproof, which usually takes three or more applications. In America, a spirit solution of metallic soaps is often brushed onto the leather to make it waterproof.

Soap is used in a great many finishing recipes for chrome calf, sheep and harness backs. White curd soap is the most popular for this purpose, and it appears to have a lubricating action on the fibres as well as increas-

(*Turn to Page* 33)

CITRONELLA

By Harry J. Monroe

MORE citronella oil is used for perfuming soap than any other essential oil. At the present time, with Ceylon oil selling for 22c a pound and Java oil selling for 32c, the market for these important soap perfuming oils is about at the lowest point ever known. This situation has prevailed for the better part of the past two or three years, and appears to be getting more acute. About five years ago, the market for Java oil was around 54c and Ceylon about 44c. Prices in 1933 rose and fell somewhat, but struck an average at about 46c for Java and 35c for Ceylon. In 1934 the market showed a distinct downtrend, prices at the beginning of the year being from 45 to 50c for Java and 38c for Ceylon, and then dropping steadily, especially in the case of Ceylon, striking bottom at the end of the year at 32 to 37c and 34 to 40c. This market continued for the first few months of 1935, and then Ceylon started on the upgrade and Java kept on falling. At the end of the year, prices stood at 29c for Java and 25c for Ceylon. Prices for Ceylon have fallen further this year, while Java prices are showing some strength. A more detailed study of this price development is given on the accompanying graph.

It seems logical to conclude that the current situation in citronella is due wholly to overproduction. There has been much-a-do, however, about the stand of citronella in the chief producing regions, and there has been a growing activity in the direction of new products and the discovery of new uses. These circumstances, in addition to normal economic correction, seem bound to bring changes in the market sooner or later.

The oldest type of citronella oil on the market today is that obtained from Ceylon. It is distilled principally from Andropogon nardus, L., N.O. Graminaceae, commonly known as "lena batu" grasses. At the present time there are more than 40,000 acres of these grasses under cultivation in Ceylon, giving an annual production of oil which is rather steady, and which is localized in a few regions. In the case of citronella grasses, seeds are rarely produced, and so the grass is propagated by planting slips obtained from well-grown, uncut tufts. In Ceylon, these slips are planted at a distance of one to two feet apart, and are cut about eight months after planting. Crops can be obtained once every three or four months from this time on, until the plants are about fifteen years old. After about ten years from the time of planting, the yield of oil decreases, and it is not profitable to distill the oil much after this time. The Ceylon citronella plant grows in practically any soil, and does not require a great deal of humidity. About eight tons of grass, yielding about 70 lbs. of oil, are produced annually per acre.

After the grass has been cut, it is left in the sun for a few days to dry. It is then taken to the distilleries and must be distilled at once to avoid fermentation. The distilleries are equipped with modern stills having capacities of half-a-ton to a ton of grass, the direct-steam process being used. Worm-pattern, water-cooled condensers from thirty to sixty feet long are used. One distillation requires about six hours, and only two distillations are carried on daily. After distillation, the oil is filtered several times and put in tins for export. There are two main qualities of Ceylon oil on the market, estate oil, which has the higher geraniol content and fair average quality oil, which is supposed to comply with the Schimmel Test.

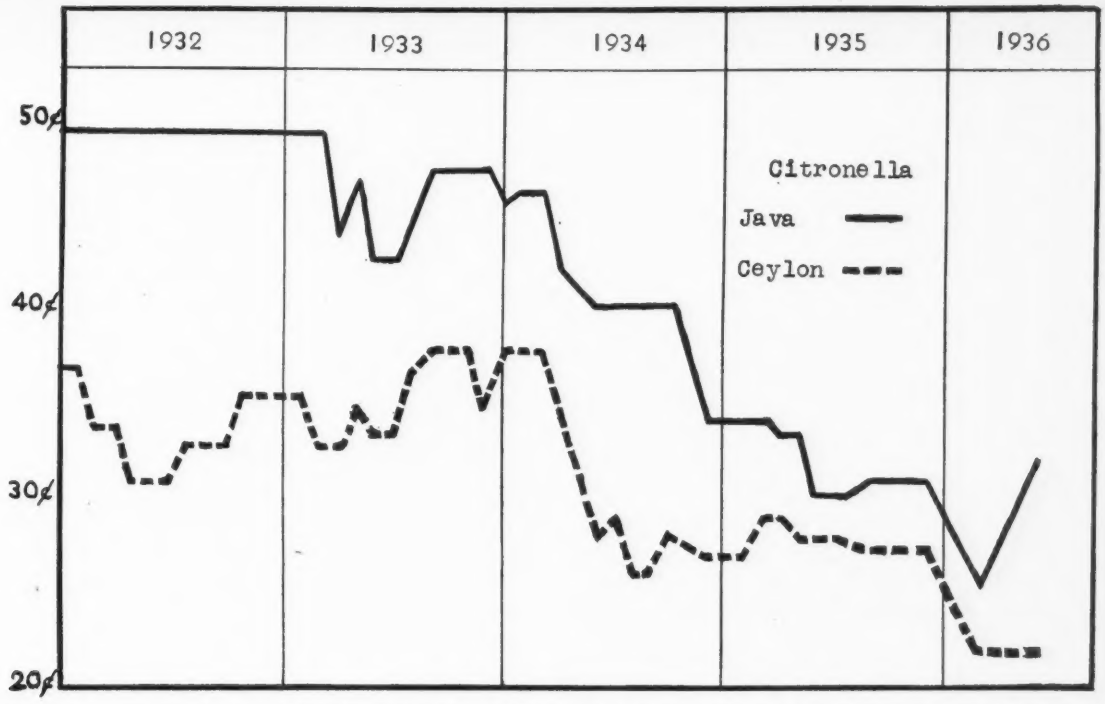
Climatic conditions in Ceylon affect the production of the oil considerably. During periods of drought, the grass gets dried up and the production is very poor, but when there is too much rain distillation is also held back.

Java citronella has been produced since about 1900, when the first quantities of the oil appeared on the essential oil market in London. Production in Java gradually grew, and by 1919 larger quantities were exported from Java than from Ceylon. The Java oil surpasses the Ceylon type in odor value and in purity. At present, Java is really the principal supplier of citronella oil in the world market. A comparison of the status of the two is given in Table I.

TABLE I.
Total Exports of Citronella Oil (in tons)

	From Java	From Ceylon
1934	1,778	764
1933	1,522	730
1932	991	640
1931	886	602
1930	809	606
1929	867	595
1928	1,140	586
1927	1,312	686
1926	1,182	723
1925	826	...
1924	530	703
1923	477	559
1922	434	663

Java citronella is distilled mainly from the "maha pangiri" grass, which is also known as "winter's grass" and old citronella grass. Technically, it is called Cymbopogon nardus (Andropogon nardus, L., N. O. Gramin-



Price movements of citronella oils in the New York market during the past few years. Charted in cents per pound in drums.

aceae). The grass is planted both by the natives and by estates, which are equipped with distilling apparatus. These estates vary consderably in size, but an average estate harvests about 300-500 acres annually, and those equipped with distilleries operate about from four to eight stills, putting out yearly some twelve to eighteen tons of oil. Some estates, however, together with the natives, sell the cut grass which they have grown to neighboring distilleries. About six tons of grass are obtained per acre. The average yield oil s about 0.5-0.6 per cent by weight.

In Java the plants are propagated in the same manner as that described for the Ceylon type,—by obtaining slips from the division of well-grown, uncut grasses. These slips are planted about two to three feet apart during the wet season,—from October to May,—as the shoots take root more easily at this time. Once the plants have successfully taken root, they grow very rapidly and in about six months they are three feet high and ready for cutting. The Java citronella grasses take a great deal more from the soil than do the Ceylon plants, and require a richer soil, and more moisture. Java soil is very fertile, but extremely clayey, and so without an abundance of rain working is very difficult. The finest plants are those which are grown on sunny hillsides, for sun as well as moisture are required for proper development. Sometimes, however, maha pangiri grass is planted in the terraces between young rubber trees, but the quality of this grass is not as satisfactory as the other.

TABLE II.

Exports of Ceylon Oil to Principal Consuming Countries (in tons)

	United States	Great Britain	Germany	Holland
1934	307	198	48	37
1933	354	150	59	18
1932	286	164	48	23
1931	196	139	68	44
1930	231	153	68	24
1929	213	156	63	29
1928	211	163	67	28
1927	302	149	65	...
1926	288	216	63	24

The first crop of this Java grass is obtained about six months after planting. After this time, crops are obtained at regular intervals about four times a year. It is absolutely essential that the grasses be cut regularly in order for the growth not to become too dense, as the plants will flower and run to seed. The oil content is greatest in the young leaves. Very fine crops can be obtained for about four or five years, but after this time the grass gradually becomes exhausted. After about ten years it is customary to replant the fields, because when the grass has reached this age, it can no longer be worked profitably.

When the grass is planted on rubber plantations, its growth is harmed by excessive shade and it is of no

value after six or seven years. The leaves are cut from the base of the plant to within one foot of the soil with sickles as no other means can satisfactorily be employed on account of the bushiness of the growth. The time considered best for cutting is when there are three or five leaves on each head. The stalks contain practically no oil. The grass which is cut by the natives is put up in bundles usually and sold to estates, which are equipped with distillation apparatus. About one-tenth of the estates distill grass bought from the natives. Recently some distillation is being carried on by the natives, who bring small distilling apparatus out to the harvesting fields.

The grass is spread out and dried for four or five days before it is distilled. It is not left in piles in order to avoid the consequent heating effects and fermentation. About 65 per cent of the weight is lost by this drying. It is more desirable to distill this dried grass because the diminution of the moisture content results in a saving of fuel, a greater amount of material can be packed into a still, and the oil separates more easily from the water. This latter effect is accounted for by the absence of the gummy matter which seems to pass over with the distillate when fresh grass is distilled. This, naturally, would retard distillation. The grass is chopped into lengths of about 5 inches as it has been found that more oil is obtained from cut grass.

The distilleries are equipped with modern apparatus, and are located where a suitable water supply is available. Direct-steam distillation is used. If high pressure steam is employed, the grass turns black and a dark-colored oil is obtained. A 15-lb. pressure is most satisfactory. It is important for the oil to be in contact with the steam for as short a time as possible. If the condensation is carried on properly, the separation of the oil from the water takes place rapidly. The time required for a distillation varies in different cases. It is not profitable to extract all the oil from the grass. The oil obtained can be clarified by filtering it through blotting paper or several thicknesses of fine muslin. Talc is sometimes added before filtering the oil. Any cloudiness which is due to the presence of water in the oil is removed quickly by agitating the oil with powdered anhydrous sodium sulfate.

The condenser tubes are generally made of good quality tinned-copper. Iron tubes can be used, but they cause the formation of a sediment in the oil, and a quantity of the oil is lost in the process of removing this sediment. Lead pipes also cause the formation of a poisonous sediment. When iron tubes are used the color of the oil is yellow to yellowish-brown, due to reactions which take place between the oil and the metal. If enamel stills, however, are used, the oil is practically colorless. About fifty to sixty pounds of oil citronella fields are obtained per acre annually. The exhausted grass makes a valuable material for fertilizing. The export center for this oil is located at Batavia.

Some grades of Java oil are higher in geraniol and others have a higher citronellol content. The total amount of alcohols present should be 85 per cent, whatever proportions of alcohols they are made up of.

Whereas the production of citronella oil in Ceylon is fairly steady, the production of Java oil is subject to considerable fluctuation. When there is an over-production, the prices fall and the natives are not satisfied to work for the low income which follows, but nevertheless citronella oil is an important product for Java.

IN the Malay states, citronella grass has been planted on hilly lands as a preventive against soil erosion. Recently a number of estates in Malay have been contemplating the production of oil from these grasses, which are of the Java type, but there is no actual important production of citronella in this vicinity as yet.

Formosa seems to be looming on the horizon as an important producer of citronella oil. This development is of significance inasmuch as it will enable Japan to become relatively independent of Java. In Central America citronella oil of the same quality as Java oil is being produced, but only in small quantities. There are possibilities, however, of a considerable increase in the production of this region.

In several of the English colonies, such as Kenya and Seychellen, much is being done in the way of production of citronella as well as other essential oils. Although there has not yet been any commercial activity, the possibility for it is rather great, pending an increase in the price of Java oil. This event would be of much importance inasmuch as these Colonies would get the support of preferred duties in the United Kingdom. The same situation now exists in the French Colonies, where citronella grass is being planted. Indo China, especially, is coming to the fore as a potential competitor of Java.

OILS obtained from different regions differ widely in chemical composition. The color of the oils varies from yellow to yellowish-brown to green. It has been observed that nearly all oils change color in this direction or the opposite way as temperature and weather conditions vary. This phenomenon is possibly due to a tautomeric change which takes place in the coloring matter of the oil. In cases where oils are permanently one color, the color is probably due to the metal from which the still is fabricated. Thus a green color in the oil comes from the copper of the still in which the oil was prepared.

Geraniol is the chief constituent of citronella oil, its content ranging from 55 to 92 per cent in different oils. Other constituents of citronella oil which have been recognized are: citronellal, camphene, dipentene, methyl

heptenone, borneol, methyl eugenol esters of valeric acid, l-limonene, an alcohol resembling thujyl alcohol, esters of d-citronellol, nerol, geranyl acetate, and farnesol.

A comparison of the two main types of citronella oil is given by the following:

TABLE III.

	Ceylon Oils	Java Oils
Specific gravity	.898 – .920	.882 – .900
Specific rotation	—7°– —18°	—0°– —5°
Refractive index	1.4785–1.4900	1.4640–1.4725
Total Geraniol	55–62%	80–92%

It seems that citronella oils distilled under the same conditions of temperature and pressure show similar physical characteristics but different geraniol contents.

ABOUT 75 per cent of the total consumption of citronella goes into soap. It is good for soap since it has a strong odor and can be used for both white and colored soaps without any discoloration. The oil can be used alone in soap, where a low-priced odor is required, and not much attention is paid to the quality of the odor, or it may be blended with other cheap oils, such as rosemary and thyme, or with synthetic products. In such blends usually 25 or 20 per cent of citronella is used. The demand for citronella oil for soap perfuming is subject to a great deal of fluctuation. If prices for citronella are low, then this oil is substituted for other perfumes in soaps. If the price is fairly high, the reverse is true.

Citronella also finds extensive use as a perfuming material for disinfectants, spray products, and wherever a cheap pungent odor to mask the undesirable odors of other ingredients, is desired. About its only competitor in the way of most-odor-for-the-least-money is artificial sassafras. Although the Java citronella oil is of the finer quality, usually being more pure and possessing a better odor, the Ceylon type, which has a cruder odor, finds wide use. The choice of one oil or the other for the most part rests on market conditions at any particular time.

Common adulterants usually found in Ceylon citronella are kerosene and fractions of citronella oil which remain as by-products after geraniol removal, or other preparations have been made from the oil. Kerosene lowers the specific gravity of the citronella oil. Some amount of fatty oils have also been used for adulteration. A number of tests have been proposed for the detection of adulteration and much discussion has been aroused. It is really doubtful whether any conclusive test actually exists. The behavior of the oil with 80 per cent alcohol is usually relied on for the detection of adulteration. When so treated, petroleum oils bring about a milky coloration, and, on long standing, separate out on the surface of the liquid. Fatty oils cause the formation of a cloudiness in the mixture, and they separate in drops on long standing. The solubility of the oils in 80 per cent alcohol is a common basis on which purity is determined.

GERANIOL, a colorless liquid with a delicate rose-like odor, is prepared from citronella, as well as from palmarosa oil, geranium oil, and "eucalyptus citriodora," among other oils. This means that citronella is subject to competition from these others in the preparation of a very important product. As a matter of fact, the geraniol derived from palmarosa oil is valued above that derived from citronella. Geraniol is used for the preparation of a number of aromatic chemicals and synthetic oils such as citronellol, nerol, linalol, citral, artificial bergamot oil, and artificial lavender oil. Another important product obtained from citronella oil is citronellal, which is the basis of such products as hydroxycitronellal and synthetic menthol. But in this case, also, citronella oil does not have the monopoly, inasmuch as citronellal can be obtained as well from eucalyptus citriodora, an oil which is now being distilled in several places, particularly Australia, Seychellen, and Central America.

Both citronellol and citronellal can be used for perfuming soaps, and can be used in both white and colored soaps since they bring about no discoloration. The odor of citronellal, however, is not sufficiently lasting. It polymerizes rather quickly and turns to an isopulegol odor. Citronellol, however, is of tremendous value in rose odors. Although its odor fades gradually, it is perceptible and agreeable to the end. In the preparation of these products, Java citronella oil is the type which is practically exclusively used, Ceylon oil being used generally as such.

A number of interesting compounds which either occur naturally in citronella oils or can be derived from them are:

Citronellyl acetate—occurs naturally in the Ceylon oil and has an odor resembling a mixture of lime and bergamot oils. It is used in special types of rose and carnation perfumes and for sweetening almost any type of perfume.

Citronellyl benzoate—has the odor of dried rose petals and is an excellent fixative in rose perfumes.

Citronellyl formate—has a bergamot-cucumber-rose odor and is useful in special types of rose perfumes.

Citronellyl valerianate—has a peculiar rose-like fragrance and is used as a blender in perfumes and more often as a flavor for tobaccos.

———♦———

The oil in uncrushed seeds is held by capillary forces within the interstices of the plasma gel. When the seeds are crushed, the oil becomes distributed as a thin film over the enormous area of the newly created surfaces of the meal particles. It is held there by surface tension and adsorption forces of very considerable magnitude, which have to be counteracted. Water in the moist meal cannot be regarded as a liquid phase, since observation shows that it is not present in drop form in the meal, but has been absorbed to swell the hydrophilic colloids present in the meal particles. A. M. Goldovski. *Fettchem. Umschau* **43**, 21-6 (1936).

Improving Toilet Soaps

Some practical observations on composition, bleaching, drying, milling, plodding, and stamping from the United Kingdom

By Joseph M. Vallance
Warrington, England

TOO frequently, as a corollary of modern high-pressure industrialism, an increase in mechanical efficiency is accompanied by a corresponding decrease in manual skill. This tendency is to some extent evidenced in the present-day mass production of milled toilet soaps. True, progress has undoubtedly been made during the past few years in the bleaching and pretreatment of raw materials, the conservation of factory floor space, improvements in machinery, and, consequently, reduced costs of production. Yet in spite of this, there are still too many toilet soaps on the market which do not come up to the necessary standard of quality in regard to freedom from cracking, absence of grittiness, and other important physical and esthetic factors.

A tablet of toilet soap, for example, was sent to the author recently for examination and analysis. This lathered very poorly indeed in the cold weather we were then experiencing, yet proved to be quite a model soap when used in a warm room. The obvious comment was that the soap stock combination employed in its manufacture had been improperly balanced, and due regard had not been paid to the low temperature prevailing and the season of the year generally.

In the old days, when almost everything depended upon the individual skill of the man at the kettle, such a simple mistake could scarcely have occurred. Now, however, it is fairly common today for manipulation and adjustment of soap stocks to suffer at the expense of a vastly improved, but somewhat rigid chemical engineering technique. However, the good of the present system very obviously outweighs the evil. There is no reason at all for lack of success in modern fine soap making if only attention is paid to small details that, though apparently trivial, make all the difference in the world in the finished product.

Where, then, shall we look for improvement? First

of all, to the type and quality of the raw materials used. Then to the application of the old-fashioned soap boiler's skill to the problems raised by modern automatic plant and the rapidity of modern production methods. Finally, to a consideration of recent discoveries and their bearing upon the future of the industry. We can only hope to glance at a few of these factors in the space of a short article, but each must be gone into thoroughly if the maximum degree of success and satisfaction is to be attained.

Much has been written on the subject of toilet soap stocks that may be perfectly good theory, but yet is not in accordance with experienced practice. The evolution of a satisfactory combination of raw materials is not really such an easy proposition as it sounds, owing to the necessity of keeping to a standard titre or hardness, coupled with the ability to obtain stock that is nearly neutral. As has frequently been stated, the absence of a high free fatty acid content is very necessary if lasting results are to be obtained without signs of deterioration.

In the United Kingdom, preference is almost invariably given to combinations of prime quality tallow and coconut oil, sometimes in association with bleached palm oil, soya bean oil and not more than 3 per cent W.W. rosin. The last named addition, although quite commonly employed, is by no means essential. Prime quality white greases of the lard type are also used. Castor and olive oils are sometimes incorporated in the pan charge, but not of course in any notable quantity.

Although distilled whale oil fatty acids have been suggested for use in toilet soaps, a concensus of opinion among British soapmakers would seem to contra-indicate their employment in this direction. As a matter of fact, distilled fatty acids as a group are not employed in toilet soap manufacture in the U.K. owing to their tendency to discolor the finished products. Cottonseed oil, when used, should not exceed 7 or 8 per cent. Moreover, it is worth noting that bleached palm oil, if used in a higher proportion than 10 per cent of the total stock, increases the possibility of cracking.

Characteristic pan charges may be built up as follows: (a) 72 parts of prime tallow, 25 parts good quality coconut oil, 3 parts soya bean oil; (b) 76 parts best white tallow, 24 parts coconut oil; (c) 70 parts prime white grease, 20 parts coconut oil, 5 parts bleached palm oil, 5 parts neutral olive oil.

Beef tallow, not mutton, should always be used in fine soap making, for the reason that mutton tallow exhibits an objectionable odor on storage. Moreover, the tallow should be chosen with extreme care, as too high a titre in this material will cause trouble later by producing too hard a soap. The titre of the combined fats and oils in any charge should lie between 32° and 35° C. The grade of tallow used should be the best obtainable, with an average free fatty acid content of not more than 6 per cent and preferably as low as 3 per cent.

One cannot lay too much stress on the necessity for careful selection of toilet soap stocks. By far the safest

Above left: What goes into the kettle must come out in the final soap. The type and quality of raw materials is preeminently important. In spite of modern chemistry and soapmaking skill, fine toilet soaps cannot be manufactured economically from improper or low grade raw materials. **Right:** Skillful milling is essential in toilet soap improvement. The composition and texture of the soap as it comes from the mill is also important in determining the character of the finished bar.

practice is to make a piece of soap from each lot of potential raw material and allow it to stand for 48 hours, in order to check up on possible discoloration, etc. The present writer was once offered a beautiful white batch of tallow at a very low figure, but first took the precaution of making a laboratory sample of soap from it. The sample proved, by its subsequent bad color, that the tallow had been over-bleached, and the proffered batch was of course rejected. This exemplifies the outstanding necessity for caution in purchasing supplies.

OILS and fats are commonly "earth" bleached before use in the actual soapmaking process, although bleaching of the entire soap mass in the kettle is now increasing in popularity, the most widely employed materials for this purpose being sodium persulfate (added in paste form), sodium hypochlorite and, particularly, sodium hydrosulfite. The ideal to aim at should be kept constantly in mind, i.e., a good soluble, easily-lathering white base, free from brittleness and of a firm, plastic consistency.

Little need be said here regarding the boiling process, for this is mostly well known. It should be remembered, however, that there is frequently a good deal of tallow present in a toilet soap charge and that, for this reason, the maximum care must be taken to ensure complete saponification. This is achieved either by boiling "on grain" for several hours, in the presence of strongly caustic lye, or by opening up the "closed" contents with just enough caustic lye and boiling for at least a day.

Whatever slight variations there may be in the boiling process, at the end of the final "fit," the amount of common salt and alkali present should be reduced to a maximum of 0.25 per cent sodium chloride and 0.15 per cent alkali calculated as Na_2O. Excessive amounts of either of these two materials are highly conducive to cracking. The customary silver nitrate test for salt is used to determine the amount of sodium chloride present before the soap base is passed for use. As this factor is such an important one, the present writer advocates the use of caustic soda lye for graining out the tallow soap, in preference to solid salt or brine solution.

The prevention of subsequent deterioration in the soap, if all other precautions have been taken, resolves itself into the incorporation of a suitable chemical body for the retarding of oxidation. Anti-oxidants such as formaldehyde, stannous oxide, sodium stannate, sodium silicate and so forth have all been tried out with varying degrees of success, but by far the most useful of all these reagents is stannous chloride or tin crystals, used in the proportion of not more than 0.2 per cent. A strained 7 in 5 solution of stannous chloride ($SnCl_2 . 2H_2O$) in hot water may thus be added before milling to the dried soap chips, in such a quantity as to give approximately 0.2 per cent of the crystals, in comparison with the total weight of soap.

THE milling base is nowadays dried usually by use of chilling rolls, and subsequent passing the wet ribbons through a heated dryer. The older method of cooling in frames, following by chipping and drying is still used in some cases. With the former method, there is a tendency, unless due precautions are taken, for the resultant chips to be over-dried on the outside skin and under-dried in the center, but this may readily be corrected, later on in the process, by passing the soap through milling rollers at the end of each belt in the drying chamber, thus ensuring that fresh surfaces are presented for drying and improving the homogeneity of each individual chip.

Whether or not a mixer is used before milling is largely a matter of general plant layout, but a system that has always given the present writer great satisfaction envolves a "tumbling tray" dryer, from which the chips are semi-automatically delivered to a mixing machine, passing from that to a two-way four-roll mill, plodder and stamping machines. Perfume, color (if any), superfatting agents, anti-oxidants, are added in the mixer,—the chips being used (wherever possible) direct from the drying machine, in order to avoid the potential grittiness which follows on prolonged storage and usually requires repeated milling to eliminate.

If the base has been super-dried, it is obviously impracticable to add water to it. A good quality white soft soap has been suggested in such cases, but probably the easiest and most efficacious method of increasing the moisture content is to add the requisite proportion of a chipped hard soap of about 50 per cent fatty acid content.

A further point to insure is that no abnormal loss of moisture occurs during the milling operation. The metal rollers, therefore, should not be chilled to too low a temperature, and the soap on leaving the mill should be slightly warm. If the rollers are chilled too much, the soap will emerge in a cold, hard state that will throw far too heavy a burden of responsibility upon the plodder and stamping machines. Cracking is not easy to obviate under such conditions.

Mill rollers should, of course, be kept perfectly smooth and adjusted to turn out as fine a ribbon as possible, preference in toilet soap production being given to a crimped or crinkled ribbon, as obtained by the use of a small angle iron fitted at right angles to the scraper device.

EFFICIENT plodding and stamping are absolutely essential in the making of a first-class toilet soap. Just as grittiness can frequently be traced to unsatisfactory drying or milling, so can the tendency to warp or crack be attributed, in many cases, to poor plodding or incorrect stamping.

Plodders should be chosen with care and manufacturers' instructions kept well in mind. Loss of compression should be avoided by feeding the milled soap uni-

formly, so that no "pockets" are formed. Clearance between the plodder worm and barrel is usually 2 or 3 thousandths of an inch. The water-cooled jacket should not be too cold, as this will tend to reduce the pliability of the extruded soap,—while if the temperature is too high, an undesirable transparency will in all probability result.

The plodder nozzle should be uniformly heated to a temperature just bearable to the touch, although it should be noted that a dry soap naturally requires a higher temperature for easy extrusion than a moist one. Too much heat at the nozzle results in blister and ridge formation, while a lack of heat tends to roughen the soap surface.

Plodder plates or dies should conform as closely as possible with the shape of the finished tablet. This calls for a good stock of such dies, but the additional slight outlay represents money well spent. If the soap manufacturer makes shift with only a few dies, the shape of his tablets will almost certainly suffer, and the possibility of cracking be greatly increased.

In connection with the stamping of toilet soaps, it is important that general mechanical principles regarding strains and stresses should not be overlooked. Thus we find that cushion-shaped rectangles and ovals are at all times easier to handle than flat rectangular tablets, being more satisfactory geometrically and therefore much less prone to cracking.

In brief, compression marks should be avoided at all costs by close co-ordination of the shape of the plodder orifice and that of the mould of the stamping machine. In conclusion it may be noted that the use of a good superfatting agent, to the extent of 1 per cent of the total soap base, usually tends to make the soap more plastic and easily worked. Stearine, lanolin, white petroleum jelly and a trace of Montan or other wax, have proved extremely helpful in this connection.

Soaps in the Tannery

(*From Page* 25)

ing the penetrative powers of the finishing emulsion. In the preparation of water pigment finishes now extensively used for all classes of light leather, soap is commonly used to stabilize the emulsions, and pigment manufacturers are turning their attention to the soaps of triethanolamine, particularly those made by mixing together the vegetable oil acids and the base. Triethanolamine soap made with stearic acid is now being utilized for the preparation of carnauba wax emulsions which find many uses in the trade as finishes and dressings.

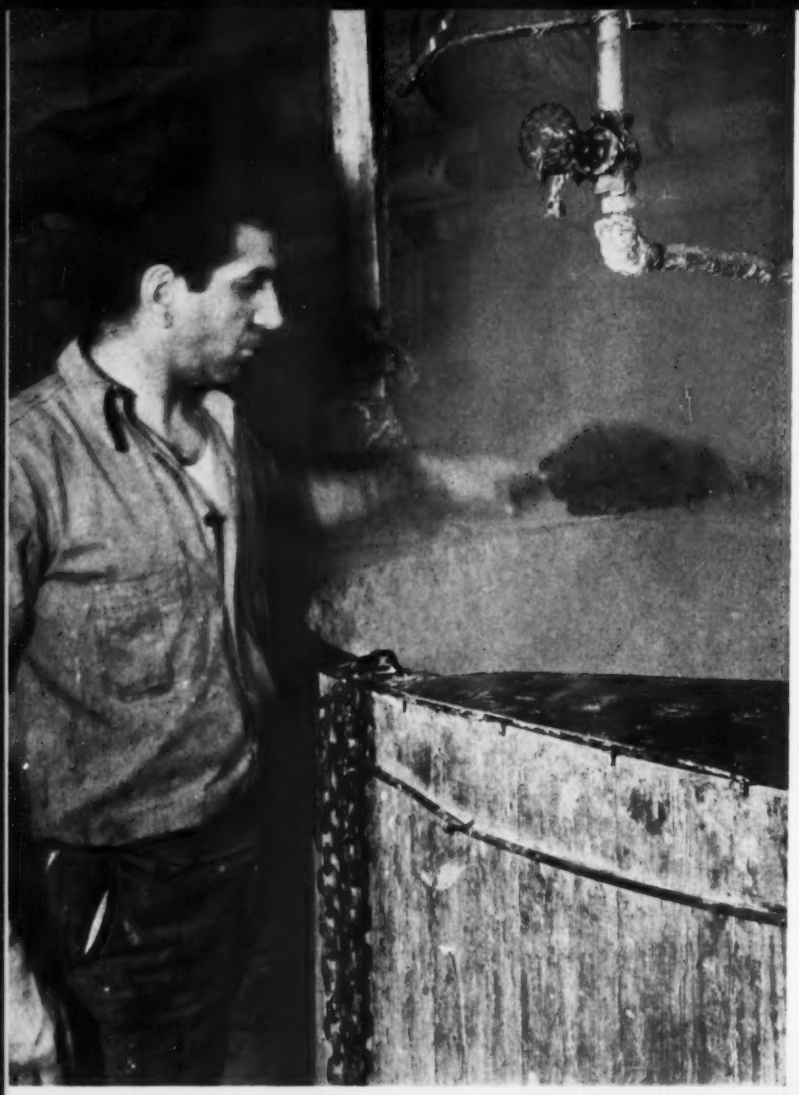
SULFONATED vegetable and fish oils find important uses in the tannery for similar purposes as soap, and soap and oil emulsions. Sometimes sulfonated oils are used in conjunction with soap and free oil to make heavy fat-liquors. Generally speaking, the sulfonated oils made by the cold process are preferable for use in the tannery as they are less affected by presence of free mineral acids, and traces of lime and magnesia compounds. They also appear to have better penetrative and lubricating properties. Sulfonated oils are valued by the tanner because they are fairly constant as regards physical and chemical characteristics, and they are not likely to strip dyed goods, or to precipitate if chrome tanned leathers are not perfectly neautral.

The tanner also knows that with sulfonated oils he can find a simple-to-make fat-liquor for any particular class of leather. For instance, Turkey-red Oil, (sulfonated castor oil) is suitable for fancy leathers; sulfonated neatsfoot and olive oils for gloving and clothing leathers; sulfonated sperm oil for calf and upper leather, and sulfonated whale oil for still heavier leathers.

Sulfonated oils are very economical in use, especially when mixed with mineral oil which has an excellent lubricating action on the fibres, and great capillary penetration. Some fish oils will hold as much as 80 per cent mineral oil and yet emulsify quite easily, and in the ordinary way. Sometimes these mixtures of sulfonated and free mineral oils are used to lower the surface tension of vegetable tanning liquors and to produce a plump, soft leather with a fine, smooth grain.

Recently, mixed sulfonated oils consisting mainly of olive, neatsfoot and cottonseed oils, have been used in the trade and good results obtained. It has been the general experience in the oil industry that better results are obtained by sulfonating the mixed oils than mixing the sulfonated oils. Improved methods of preparing sulfonated oils are likely to benefit the tanner, and no doubt the sulfonated fatty alcohols will soon be widely used. At present they have not been pushed in the leather industry on account of their high cost, but once this is considered economic, then they will, no doubt, be taken up. For the preparation of leather dressings and finishes, the sulfonated fatty alcohols would appear to be very suitable.

The addition of starch to soap has been carried on for a long time. When heated with water, starch swells and in this state has the capacity to adsorb foreign matter and thus possesses detergent properties of its own. Starch also acts as a protective colloid. A new starch developed in Germany is said to possess the advantages of ordinary starch but does away with difficulties arising from its use in soap. Fine quality soaps have been made with 15 per cent of this special starch and it is possible to use up to 30 per cent in soaps. Starch-containing soaps can be recognized by the common test with dilute iodine solution. The lathering power of soap is reported to be increased by the addition of starch, while the lather is stabilized and acquires more creamy quality. W. Kroner & G. Sternhoff. *Seifenseider-Ztg.* **63,** 272-275 (1936).



. . . as the soap maker

◆

A tank of tallow is unloaded, and..

sees it

. . . is pumped to the kettle

. . . the kettle boils

New Products

Two new products by Kleenwell Products of Chicago,—a subsidiary of Chicago Sanitary Products Co.,—emulsion furniture polish and household soft soap. Bottle by Owens-Illinois. Can by Continental Can.

A new five-gallon steel container for Rapidol Shampoo for the beauty shop trade. Shampoo manufactured by Rapidol Distributing Corp. of New York. The container by Wilson & Bennett of Chicago.

Disinfectant, furniture polish, and shoe cleaner,—three companion products in new and attractive dress. Manufactured by La Maison Products, Inc. of Brooklyn. Disinfectant bottle by Knox Glass,—other two by Hazel Atlas. Closures by Armstrong.

and

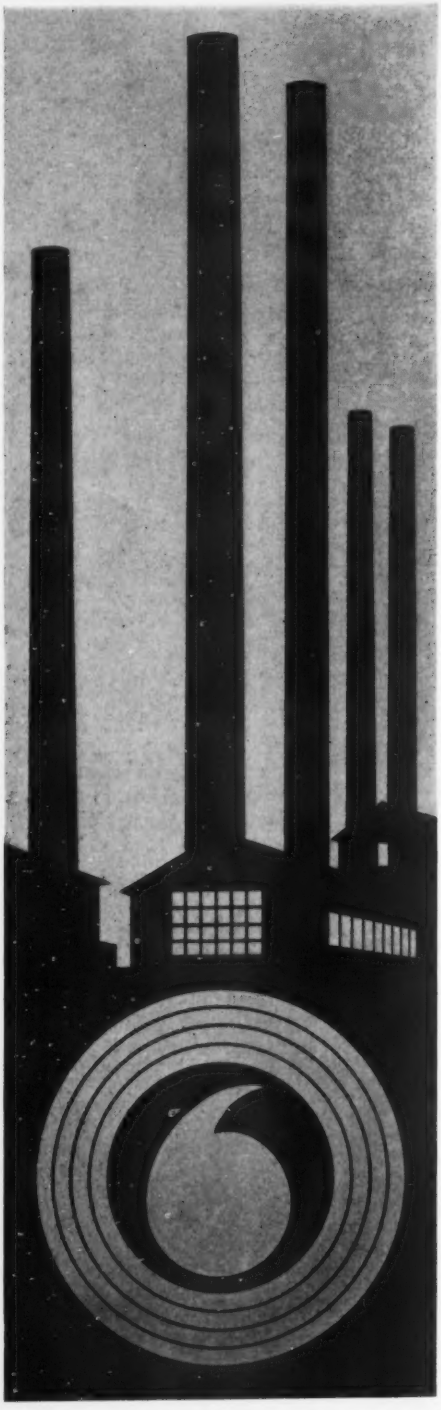
Packages

Baldwin Laboratories of Saegertown, Pa. adopt striking green, black and white steel pails for their five-gallon packages of "Dwin" household fly spray and stock spray. Containers manufactured by Wilson & Bennett.

A fancy toilet soap which has had an unusually wide distribution and sales success over recent months,—one bar to the box, — Gardenia Complexion Soap of the Allen B. Wrisley Company of Chicago.

Shell redesigns the containers for its new line of household specialties. Improved cans lithographed in the Shell colors, —orange, red, and white with sealed closure. Closure is a new type Kork-N-Seal by Williams Sealing. Cans by Continental.

TURNER



CAUSTIC POTASH

Turner Caustic Potash is especially adaptable for manufacturers of soaps, oil soaps, dry cleaning soaps and textile specialties. It is available in flake, solid or liquid form in containers of all sizes to meet your requirements. Try it on your next order.

CAUSTIC SODA

Turner Caustic Soda is manufactured by the pioneers of the chemical industry and is produced under a rigid system of control during its manufacturing process. Available in solid, flake or liquid form.

TRI-SODIUM PHOSPHATE

Turner T.S.P. is a brilliant white product. It is free flowing, quickly soluble, and will meet every cleanser requirement. For a superior product, Turner T.S.P. is an obvious first choice.

CARBON TETRACHLORIDE

A clear, sparkling product of highest purity, available for immediate delivery in any quantity. Users of Carbon Tetrachloride will find Turner the most reliable and convenient source of supply.

STEARIC ACID

Users of Stearic Acid can depend upon Turner for purity and unvarying quality. Single, double or triple pressed available for prompt shipment. Join the list of successful manufacturers now using Turner Stearic Acid.

•

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500 Fifth Avenue, New York — 83 Exchange Pl., Prov., R. I.

SUPPLIERS OF CHEMICALS FOR OVER 70 YEARS

NEWS . . . . . .

Kemiko in New Quarters

Kemiko Manufacturing Co., maker of cleaning powders and germicidal detergents, Newark, N. J., has just occupied a new plant at 500 Chancellor Ave., Irvington, N. J. The new quarters are in a modern building occupying two floors with about 30,000 square feet. A railroad siding runs the full length of the building. The move was made necessary in preparation for an expansion in the business as the company will shortly start the manufacture of several new items.

Colgate Employee Outing

The second annual outing of employees of Colgate-Palmolive-Peet Co. was held at Indian Point, N. Y., a few weeks ago, with more than 3,700 persons attending. The group made the trip from Jersey City to this Hudson River vacation spot on the river steamer *Hendrik Hudson.* A program of track and field events was an important feature of the day, with a silver loving cup going to the winning team representing the printing department of the company.

Elected by Swift

Albert F. Hunt has been elected vice-president of Swift & Co., Chicago. Mr. Hunt has been associated with Swift and its affiliated companies for twenty-seven years. Since 1930 he has been connected with National Leather Products Co. as vice-president and, more recently, as president.

Coast Firm in New Plant

C. Alex Laird, who has just taken over control of Solvent Compounds, Inc., San Francisco, reports that the company has completed a new plant in Redwood City, Calif., which was put into operation June 1. The company manufactures "Solco" heavy duty cleaners. Prior to acquiring complete control, Mr. Laird had been manager of the concern. Under the new set-up he retains the main portion of the stock, the concern being incorporated for $10,000.

Offer "Bab-O" Special

B. T. Babbitt, Inc., New York, recently conducted a special sales campaign on "Bab-O" in the Sacramento, Cal., district working with 375 grocers in that territory. One can of "Bab-O" was offered each buyer free with the purchase of two at the regular price.

"Sapolio" Premium Offer

Enoch Morgan's Sons Co. is currently featuring a special offer of three "Beetleware" iced tea spoons, to any user sending in the top from a package of "Sapolio".

Canada Exempts Soaps

Laundry and toilet soap, soap flakes, powders, etc., have been exempted from the Alberta 2 per cent sales tax by a recent governmental order announced in the *Alberta Official Gazette.* The exemption went into effect immediately.

Frascati With Firmenich

Dr. A. T. Frascati for the past three years associated with Max Factor & Co. at Hollywood and in London, England, as consulting perfumer in charge of their perfume laboratories, will become associated with Firmenich & Co., New York, American agents for Chuit, Naef & Cie. of Geneva, on July 15. Prior to his connection with Factor, Dr. Frascati was perfumer for Ungerer & Co., New York. He will be in charge of the perfume laboratory for Firmenich in New York.

Represents R. R. Street

Harold Buffington has recently been named Pacific Coast representative for R. R. Street & Co., Chicago, dry cleaning soaps and specialties.

Sample Medicinal Soap

Physicians are now receiving, through direct mail, an offer of a specimen cake of "Stiefel's Sublimate Soap ½ per cent," made by Stiefel Medicinal Soap Co., Montclair, N. J.

Teaspoons with "Kwik-Solv"

In a special sales drive on "Kwik-Solv", Colgate-Palmolive-Peet Co. is offering three silver-plated teaspoons for one top from a 20c "Kwik-Solv" package, plus 25c.

Wildroot Shampoo Contest

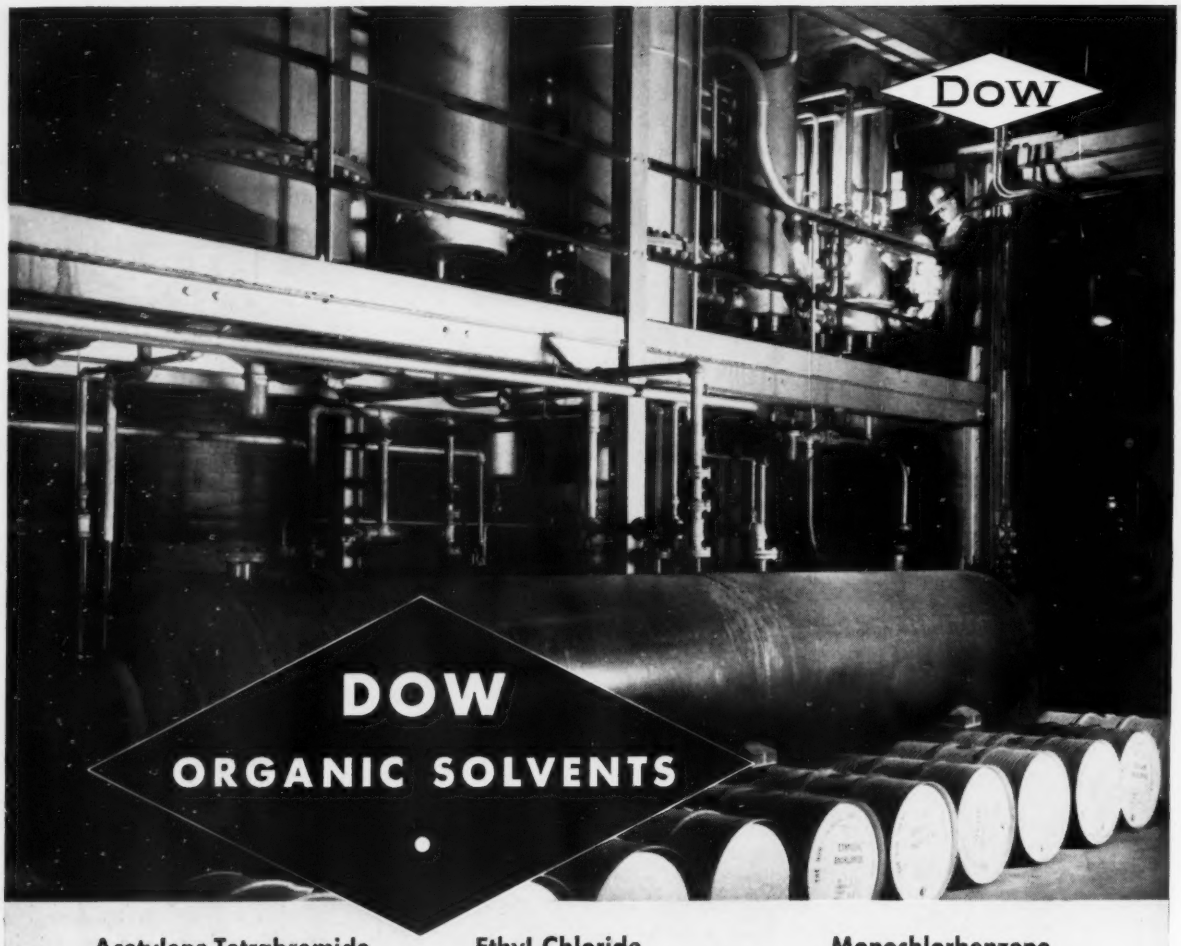
Wildroot Co., Buffalo, N. Y., is offering a Ford sedan and 102 other cash prizes in a contest in which users are asked to tell why they like "Wildroot" shampoo. The contest is featured on the company's radio broadcast.

British Soap Guide

The editors of *Soap, Perfumery and Cosmetics,* London, have just published a new *Year Book and Buyer's Guide* for the British soap industry for 1936. The new book gives sources of supply for all the raw materials, machinery, equipment, containers, etc., required in soap making and also carries a number of reference articles from previous issues of *Soap, Perfumery and Cosmetics.*

Special "Soaping" Offer

Kendall Mfg. Co., Cambridge, Mass., is featuring a special combination offer on "Soapine" in which a 19c package of the product and a four-quart enamel saucepan are being offered at a price of 39c.



Acetylene Tetrabromide	Ethyl Chloride	Monochlorbenzene
Acetylene Tetrachloride	Ethylene Chlorbromide	Orthodibrombenzene
Bromoform	Ethylene Dibromide	Orthodichlorbenzene
Carbon Bisulphide	Ethylene Dichloride	Propylene Dichloride
Carbon Tetrachloride	Methyl Bromide	Tetrachlorethylene
Chloroform	1.1.2 Trichlorethane	Trichlorbenzene
Ethyl Bromide		Trichlorethylene

PRODUCING more than the twenty different solvents listed, each designed to meet the specific requirements in its field, has given to Dow a unique knowledge of solvents and their use.

For such fundamental purposes as dry cleaning and paint removal to the more involved operations of extracting fats, oils, waxes, resins and alkaloids, Dow has developed a solvent to suit the individual requirements of the user. It is this knowledge and this experience which urges users of solvents to consult Dow.

In the first place there is the justifiable belief that Dow can and will give unbiased recommendations. Coupled with this incentive is a recognition that its solvents, in every instance, represent a quality that users of chemical products have come to regard as unquestionable.

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Branch Sales Offices: 30 Rockefeller Plaza, New York City;
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Use Sworn Testimonials

In a test campaign on "Dreft" advertising copy in the Chicago area Procter & Gamble Co. is featuring a series of sworn testimonials by users of the product. The same plan is being used in the radio broadcast, with women wishing to endorse the product being sworn in over the air.

Jergens Advances Gramke

E. T. Gramke, formerly purchasing agent for Andrew Jergens Co., Cincinnati, has recently been made assistant general manager of the concern.

J. S. Fetters Dies

Justin S. Fetters, Kansas City, head of Kansas City Soap Co., died recently of pneumonia in St. Joseph's Hospital, Kansas City, at the age of sixty-four. He is survived by his widow, four sons and three daughters.

Canada Soap Output Up

Production of soaps and washing compounds by the Canadian soap industry increased 17 per cent in 1935, the total output of the industry having a value of $16,076,959 in 1935 as compared with $13,614,464 in 1934. There were 100 plants operating in this field in 1935, employing a total capital of $14,110,858 and paying a total of $8,968,578 for raw materials. Manufacturers of polishes and dressings also reported an increase in the value of their output which stood at $2,066,680 in 1935 as compared with $1,918,998 in 1934.

Sulfonated Oil Outing

The annual sports outing of the Sulfonated Oil Manufacturers Association was held at Buckwood Inn, Shawnee-on-Delaware, Pa., June 3 and 4, with more than fifty members of the group in attendance. The usual formal business meeting was dispensed with, giving those in attendance full opportunity to enjoy the golf course of the Shawnee Country Club. Low net prize for members went to Robert W. Brewer of Liberty By-Products Co., Butler, N. J., who carded a gross of 79, playing the last nine holes in 33. The committee in charge of the outing included Fred C. Scholler, chairman; C. P. Gulick, H. B. Hooper and John C. Wolke.

Watkins Australian Plant

The new Australian plant of the J. R. Watkins Co., Winona, Minn. is expected to go into production of

Ralph G. Boalt

many Watkins items about November 1. The plant will be located at Melbourne, Victoria. Ralph G. Boalt who has been associated with Watkins at Winona for a number of years will become general manager of the Australian branch. R. P. Laird at present located at the Winnipeg, Canada, plant of Watkins, will go to Australia as production manager. Both will sail for Australia next month. The recent growth of Watkins sales in Australia under the direction of W. D. Cherry, in charge of city sales, and N. Edmunds, in charge of rural sales, has brought about the new plant development. At present, Watkins ship to Australia from their Canadian plant. The company which is the largest direct-to-consumer organization of its kind in the world, manufactures a line of several hundred items including soaps, shampoos, insecticides, disinfectants, flavors, spices, etc. E. L. King is president and active head of the firm.

Davis Soap Moves

Davis Soap Co., formerly located at 205 Post Ave., San Francisco, has moved recently to 49 Geary St.

"Rit" Brushless Shave

Rit Products Corp., Chicago, is offering a new brushless shave under the "Rit" brand.

Hand Soap Claims

A warning against antiseptic or disinfecting claims for hand cleansers or mechanics' hand pastes has been issued by T. F. Pappe of the Buffalo, N. Y., office of the Food & Drug Administration to manufacturers in that district. The notice "to manufacturers of hand cleansers (grease solvents)" follows:

"There have been noted on the market numerous hand soaps recommended as 'cleansers' and 'solvents for grease and grime,' which are labeled as being 'Antiseptic.' Examination of several brands thus labeled discloses that they do not possess antiseptic properties as used on the hands.

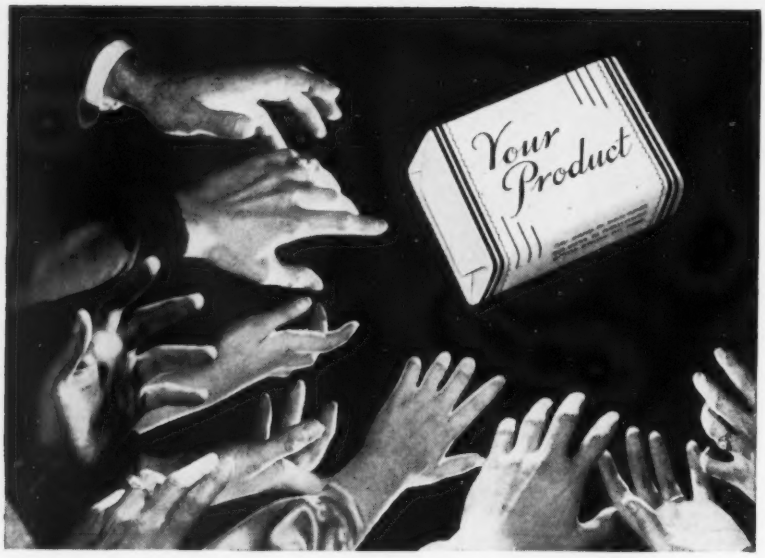
"Such statements as 'Antiseptic,' 'Safe Antiseptic,' 'Guaranteed Antiseptic,' etc., on products which possess no antiseptic properties constitute misbranding under the Federal Food and Drugs Act and render the shippers of such misbranded products liable to the penalties of the Act. The above information is given to aid you in labeling such products in legal manner."

Laurel Soap Head Dies

William H. Bertolet, founder and president of Laurel Soap Mfg. Co., Philadelphia, died suddenly a few weeks ago at the age of seventy-four. Mr. Bertolet organized Laurel Soap Mfg. Co. twenty-five years ago to manufacture textile soaps and other specialties, having previously been connected with the textile industry. He is survived by his widow, two daughters and four sons, all of the sons being active in the business.

Soap Employment Gains

The index of employment in the soap industry, as compiled by the U. S. Department of Labor, registered 97.5 for the month of May, a moderate gain from the April level which was 96.8. The comparative figure for May, 1935, was 98.2, with all figures being based on a 1923-1925 average figure taken as 100. The pay-roll index registered 95.7 in May, as compared with 93.6 in April and 93.8 for May, 1935.



Consumer Preference

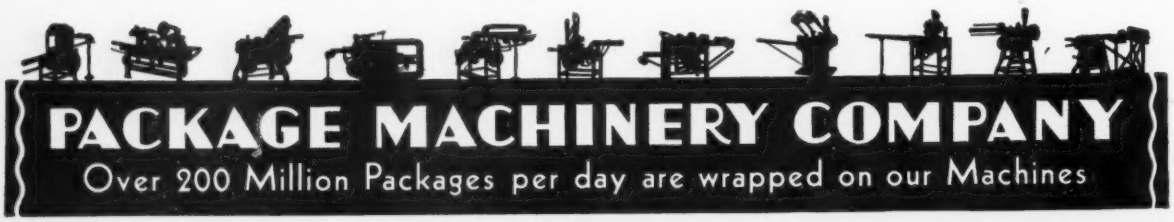
Here are two ways to increase the sales-pulling power of your package—(1) Improve its general appearance, its attention value and the quality of the wrapping. (2) Give it a special form of wrapping that will set it apart from competitors—make it distinctive.

We will be glad to assist you in developing package improvements, as we have for other manufacturers—and we may also be able to show you how you can make important savings in your costs.

Our machines wrap the large majority of toilet and laundry soaps.

Get in touch with our nearest office.

PACKAGE MACHINERY COMPANY, SPRINGFIELD, MASSACHUSETTS
NEW YORK, CHICAGO, CLEVELAND, LOS ANGELES, MEXICO, D. F. Apartado 2303
Peterborough, England: Baker Perkins, Ltd., Melbourne, Australia: Baker Perkins, Pty., Ltd.



Congress Adopts Bailey Amendment

THE Bailey amendment, imposing an excise tax of 3c per pound on imports of tallow, fats and greases, as well as whale oil, fish oil and fatty acids and salts of these products, was passed by Congress just prior to the recent adjournment of that body. The tax applies whether or not the imports are refined, sulfonated, sulfated, hydrogenated or otherwise processed, and is assessed on the first processing after entrance into the country. The new provisions become effective sixty days after signature by the President.

In the conference on the revenue bill, the Bailey amendment had been sharply opposed by the House conferees, but in the closing days of the session, with every effort being made to push the bill through to expedite adjournment, the amendment passed virtually unchanged. As originally drafted, it contained a tax of 4½c per pound on denatured olive oil and olive oil foots, but this section was subsequently stricken out.

As far as the soap industry is concerned, the principal effect of the Bailey amendment will be to shut off the few remaining sources of cheap fats for the soap kettle left following original adoption of the processing tax scheme two years ago. Imports of fatty acids of various oils, which have been coming into the country in substantial volume over the past two years, will no longer present an attractive prospect after imposition of the new tax. The unusually heavy imports of tallow over the past two years will also be ended by the new tax, it is believed.

Tallow imports into the United States in 1935 as a result of the aftermath of the 1934 drought amounted to the unprecedented volume of 245 million pounds, much of which was for edible usage. In recent months, however, no tallow has been purchased for importation, as the domestic price has been below the world price level. Other than tallow, fish and whale oils and fatty acids, the other important oils affected by the Bailey amendment are drying oils: perilla, hempseed, kapok, rapeseed, sunflower, sesame and their fatty acids and salts, all of which will bear an excise tax of 4½c per pound.

Commenting on the broader implications of the new tax as it may affect international oil markets, John B. Gordon of the Bureau of Raw Materials for the American Vegetable Oils and Fats Industries, Washington, says:

"It should be taken into consideration that the effect of excise taxes on imported oils is to depreciate their prices in world markets. It is in world markets that whatever surplus of lard the United States produces must be sold. When the lard surplus of the United States approaches to somewhere near normal its sale in world markets will grow increasingly difficult in competition with edible oils and fats, the prices of which have been depreciated by the excise and processing taxes collected by the United States Government. This country consumes too large a proportion of the world's oils and fats production to escape the fact that excise taxes which we collect on oils and fats will depreciate world prices. For illustration, palm oil in world markets in May had an index number of 51; palm kernel oil, 53; coconut oil, 55. Lower lard prices in world markets means lower cottonseed oil prices in the United States and a general weakening of the domestic edible oil and fat price structure."

The complete text of the new bill follows:

"Section 701. Tax on Certain Oils

"The first sentence of section 601 (c) (8) of the Revenue Act of 1932, as amended, is amended to read as follows:

"'(8) Whale oil (except sperm oil), fish oil (except cod oil, codliver oil, and halibut-liver oil), marine-animal oil, tallow, inedible animal oils, inedible animal fats, inedible animal greases, fatty acids derived from any of the foregoing, and salts of any of the foregoing; all the foregoing, whether or not refined, sulphonated, sulphated, hydrogenated, or otherwise processed, 3 cents per pound; sesame oil provided for in paragraph 1732 of the Tariff Act of 1930, sunflower oil, rapeseed oil, kapok oil, hempseed oil, perilla oil, fatty acids derived from any of the foregoing or from linseed oil, and salts of any of the foregoing; all the foregoing, whether or not refined, sulphonated, sulphated, hydrogenated, or otherwise processed, 4½ cents per pound; any article, merchandise, or combination (except oils specified in section 602½ of the Revenue Act of 1934, as amended, 10 per centum or more of the quantity by weight of which consists of, or is derived directly or indirectly from, one or more of the products specified above in this paragraph or in section 602½ of the Revenue Act of 1934, as amended, a tax at the rate or rates per pound equal to that proportion of the rate or rates prescribed in this paragraph or such section 602½ in respect of such product or products which the quantity by weight of the imported article, merchandise, or combination, consisting of or derived from such product or products, bears to the total weight of the imported article, merchandise, or combination; hempseed, perilla seed, rapeseed, sesame seed, and kapok seed, 2 cents per pound.'

"Section 702. Processing Tax on Certain Oils

"'(a) The first sentence of section 602½ of the Revenue Act of 1934 is amended to read as follows:

"'(a) There is hereby imposed upon the first domestic processing of coconut oil, palm oil, palm-kernel oil, fatty acids derived from any of the foregoing oils, salts of any of the foregoing (whether or not such oils, fatty acids, or salts have been refined, sulphonated, sulphated, hydrogenated, or otherwise processed), or any combination or mixture con-

MASK

unpleasant odors...

OUTSTANDING!

HONEYSUCKLE

INDIAN HAY

ORANGE BLOSSOM

LAVENDER

PINE

VANILLA BOUQUET
(For use around foodstuffs)

CONCEAL this one objectionable feature and the sales potentialities of your insecticide or fly spray will be multiplied beyond measure. Fail to do so and you jeopardize the very future of your product, for regardless of its effectiveness, fastidious housewives will not have their homes permeated with unpleasant odors.

We have studied this phase of perfuming for a number of years and in that time have developed and tested hundreds of deodorizing combinations. From these we have chosen a half dozen outstanding for their balanced perfection. Any one of these will completely mask the most persistent odor and in its stead leave a clean, refreshing fragrance. They accomplish this at low cost and without impairment of the product's efficiency. Write us and we'll gladly tell you more about them.

"Fragrance Creates Sales Appeal"

FRITZSCHE Brothers, inc.

816 WEST 8TH STREET LOS ANGELES, CAL.
Proprietors of PARFUMERIES de SEILLANS Seillans, France
FRITZSCHE BROTHERS, of Canada, Ltd., 77 79 Jarvis St., Toronto, Canada

PORT AUTHORITY COMMERCE BLDG.
76 NINTH AVENUE, NEW YORK, N. Y.
118 WEST OHIO ST. CHICAGO, ILL.

taining a substantial quantity of any one or more of such oils, fatty acids, or salts, a tax of 3 cents per pound to be paid by the processor, but the tax under this section shall not apply (1) with respect to any fatty acid or salt resulting from a previous first domestic processing taxed under this section or upon which an import tax has been paid under section 601 (c) (8) of the Revenue Act of 1932, as amended, or (2) with respect to any combination or mixture by reason of its containing an oil, fatty acid, or salt with respect to which there has been a previous first domestic processing or upon which an import tax has been paid under such section 601 (c) (8).'

"'(b) Notwithstanding the provisions of subsection (a) of this section, the first domestic processing of sunflower oil or sesame oil (or any combination or mixture containing a substantial quantity of sunflower oil or sesame oil), if such oil or such combination or mixture or such oil contained therein was imported prior to the effective date of this title, shall be taxed in accordance with the provisions of section 602½ of the Revenue Act of 1934 in force on the date of the enactment of this Act.'

"Section 703. Miscellaneous Provisions

"Nothing in Section 601 (c) (8) of the Revenue Act of 1932, as amended, shall be construed as imposing a tax in contravention of an obligation undertaken in any trade agreement heretofore entered into under the authority of Section 350 of the Tariff Act of 1930, as amended, or as imposing a tax on the importation of glycerin or stearine pitch or on the importation of any article by reason of any component of such article derived directly or indirectly from a waste not named in Section 601 (c) (8) of the Revenue Act of 1932, as amended. Section 402 of the Revenue Act of 1935 is hereby repealed. All taxes accrued or paid under Section 402 of the Revenue Act of 1935 on the importation of glycerin or stearine pitch shall be remitted or refunded under such regulations as the Secretary of the Treasury may prescribe.

"Section 704. Effective Date

"The provisions of this title shall be effective on and after the sixtieth day following the date of the enactment of this act."

◆

Soap Employment Index

The employment index for the soap industry, as compiled by the U. S. Dept. of Labor, show a slight advance in April, 1936, moving forward to 96.8 from the March reading of 96.4. This compares with 102.7 in April 1935, and a 3-year average for the 1923-1925 period of 100. The pay-roll index registered 93.6 in April, 1936, as compared with 95.0 in March and 97.0 in April, 1935.

◆

New Base by Glyco

A new emulsifying base sold under the name "Trigamine" has just been introduced by Glyco Products Co., New York. Emulsions made with the new product are said to be of interest in the formulation of polishes, agricultural sprays, textile specialties, cosmetics, etc. "Trigamine" is offered as a substitute for triethanolamine and is said to be less alkaline than the latter, a 10 per cent solution in water having a pH of 9.7.

◆

New Squibb Dentifrice

A new tooth powder will shortly be announced by E. R. Squibb & Sons, New York, backed up by an extensive advertising campaign. The powder comes in 40 and 25c sizes. As a special introductory offer one tin of each size will be sold at a combination price of 33c. After trying the small tin users will be permitted to return the large tin if desired and receive a full refund.

◆

"Rasoline" Brushless Shave

Pierre Amouroux, Inc., Rockefeller Center, New York, is introducing "Rasoline" brushless shaving emollient, made by Molinard-Grasse-France. The product has an almond oil base. A large tube sells for 65c.

Philippine Soap Maker

A concern has just been organized in Manila, P. I., by a group of Spanish-Filipino sugar interests, to manufacture soaps and perfumes. It will be about a year before the soap plant will go into operation. It is to be installed by a French expert, the machinery and equipment coming from France. As only French type soaps and perfumes will be manufactured by the new company, its products are expected to compete more with French than with American and Philippine products although there may be some competition with high-grade American brands, according to the report.

The company hopes to develop an export market for its products in some of the neighboring countries such as China, the Straits Settlements, and the Dutch East Indies. The Philippines represent an outstanding market for American toilet soaps, according to the U. S. Commerce Department's Chemical Division. Shipments to that country from the United States aggregated 1,275,000 pounds, valued at $194,000, in 1934, or more than one-fifth of the total amount of toilet and fancy soaps exported from the United States during that year.

◆

Award Soap Sculpture Prizes

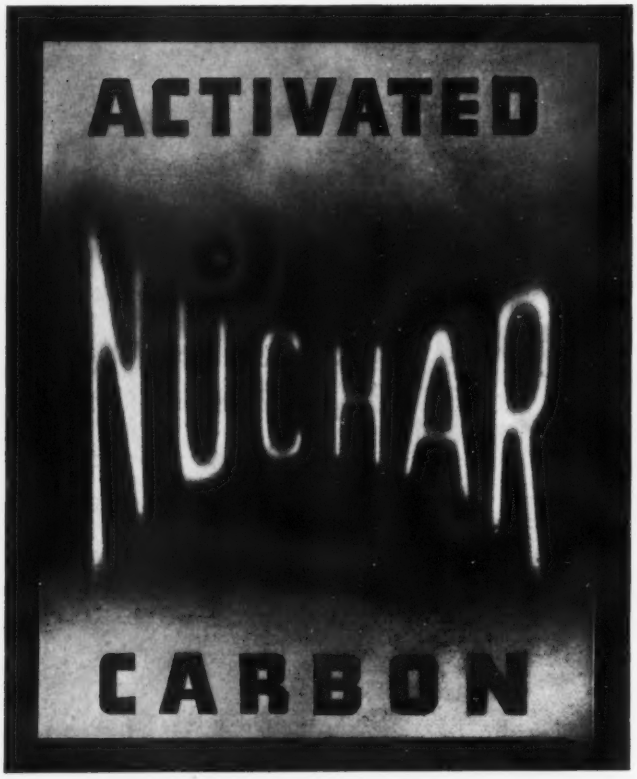
Prize winning awards in the twelfth annual soap sculpture contest sponsored by Procter & Gamble Co. were announced June 2nd by the jury of award. The awards were made immediately prior to the opening of the exhibition of the sculptures in the Mezzanine Galleries, Rockefeller Center, N. Y., which ran from June 2 to June 14. The exhibition was open to the public.

◆

Buy Akron Building

Union Chemical & Supply Co., Akron, O., formerly known as United Chemical Co., manufacturers of insecticides, disinfectants, and general sanitary supplies, has purchased the building at 353 Carroll St., Akron. J. F. Goss has recently joined the firm as general manager.

Re: REMOVAL OF IMPURITIES



NUCHAR Activated Carbon serves a very definite purpose in the soap and allied industries. It is an inexpensive yet efficient decolorizing and deodorizing agent, and offers a solution to many stubborn purification problems that have heretofore proven troublesome to manufacturers. The effectiveness of Nuchar for the economical removal of unwanted impurities from every type of product, has been proven time and again by its adoption as standard practice by a substantial list of successful firms. Nuchar is simple to use and replaces the older and more complicated purification methods, removing completely and definitely every undesirable body affecting your product. Investigate the possibilities of using Nuchar in your process. Write for samples and details—or ask for a representative to call.

● ROSIN BUYERS!

We now have available for immediate delivery in any quantity, a new and better rosin with a high abietic acid content. Write for samples and further particulars.

Industrial
CHEMICAL SALES COMPANY

NEW YORK, N. Y.
230 PARK AVENUE
CHICAGO, ILL.
205 W. WACKER DRIVE
CLEVELAND, OHIO
418 SCHOFIELD BLDG.

Oil Trades Outing

The annual sports outing of the Oil Trades Association of New York was held at the Pelham Country Club, Pelham Manor, N. Y., June 16, with over two hundred members and guests attending. The club was made available through the courtesy of Clifford Weihman, Smith-Weihman Co., a former president of the association. In the golf tournament which was an important feature of the day's program first prize in class A division went to H. B. Van Cleve of Maritime Petroleum Corp. George Wharry of G. A. Wharry & Co. won the association cup and L. Blumenshine carried off the honors in the low net competition. There was also a baseball game to engage those who insisted on something more strenuous than golf. It featured heavy hitting and loose fielding, with the lubricating oil team holding an edge of 15 to 11 when the last bat had been broken. The winning pitcher, who also paced his team with four hits, was McAdams. Other members of team, including several suspected "ringers," were: O'Neill, Strubel, McAdams, Kelty, Greenberg, Hanold, Kling, Dorland, Cavanaugh and Kaufman. On the vegetable oil team George and Palmer shared the pitching burden and were assisted at times in the field by Hart, Sonneborn, Martin, Christie, Schwartz, Smith and Bloodgood.

Chicago Golf Winners

The June tournament of the golf Auxiliary of the Chicago Drug and Chemical Association and the Chicago Perfumery, Soap and Extract Association was held at the Kildeer Country Club, June 16th. More than sixty members and guests were on hand to compete. Prize winners were as follows: Class A—John T. James, 86-15-71; Harry C. Larson, 83-9-74; John P. Bodevin, 85-11-74; Class B—H. B. Wallace, 94-23-71; L. C. Shepherd, 92-19-73; T. F. Gilson and E. M. Schumann, 93-20-73, tied; Class C—C. L. Drum, 99-29-70; E. E. Smith, 108-36-72; George Epstein, 101-27-74. Guest prizes were won by R. L. Glanz with 89-17-72, and J. M. Delaney, 92-25-67. The blind bogey was won by W. H. Weise. The next tournament is scheduled for Bob-O-Link Country Club.

Hinman with Gold Dust

H. E. Hinman, formerly with Erwin, Wasey & Co., Chicago, has been appointed assistant to W. I. Hylton, advertising manager of Gold Dust Corp., New York.

Fitch Team Wins Contest

A team sponsored by F. W. Fitch Co., Des Moines, and captained by Lucius Fitch, son of the president of the company, won a ticket sales drive conducted recently in Des Moines in the promotion of the annual May Day Frolic staged by the local Junior Chamber of Commerce. The frolic is put on each year in a Des Moines amusement park and the proceeds are used to support the philanthropic work of the chamber. As a result of placing first in the ticket sales drive the "sweetheart" of the Fitch team won a trip to the Texas Centennial.

Walter Kirk Moves

Walter R. Kirk, Inc., toilet soaps and soap flakes, formerly at 135 S. La Salle St., Chicago, has moved to 1500 Lake Shore Drive.

Chicago Drug Ass'n Lunch

The May luncheon meeting of the Chicago Drug and Chemical Association held at the Chicago Athletic Association, will be the last gathering of this group until September. One of the most interesting talks to be heard by the association this year was given by D. M. Ladd of the Federal Bureau of Investigation.

New Booklet by Ritchie

W. C. Ritchie Co., Chicago manufacturer of fancy boxes and fibre cans, has just published an interesting booklet describing their packaging service. Several illustrations of the type of work they have done for other manufacturers are given. Copies are available.

Armour Transfers Hruby

Edward L. Hruby, who for the past few years has been connected with the Chicago office of Armour Soap Works, was recently transferred to the St. Louis branch of the company. Mr. Hruby will look after the interests of the soap department in that territory.

Youngstown Concern Moves

Superior Chemical Products Co., Youngstown, Ohio, formerly operated as Superior Products Co., has occupied new quarters recently at 30 N. Watt St.

Henry J. Beck Dies

Henry J. Beck, for many years a prominent figure in Chicago's essential oil trade, died May 28th at the age of 72 after a brief illness. From 1883 to 1919 Mr. Beck was the Chicago manager for Dodge & Olcott. At the time Mr. Beck retired from business a few years ago he represented the Northwestern Chemical Co. in the Chicago territory. Hal E. Jones, Mr. Beck's son-in-law, took over the Chicago territory for Northwestern at the time of Mr. Beck's retirement.

Sanitary Suppliers Meet

The Medinah Athletic Club was the scene of the June 16th meeting of the Associated Sanitary Supply Distributors of Chicago. Before the dinner and meeting the members took a dip in the pool. It was decided that future meetings would be held on the second Monday of the month instead of on Tuesday. The next meeting will be in September.

General Exterminating Moves

General Exterminating Co., formerly located at 425 West Chestnut St., Louisville, has moved to new quarters at 1101 East Broadway.

Kilz in New Quarters

Kilz Exterminator Co., Los Angeles, has moved recently to 231½ West 4th St.

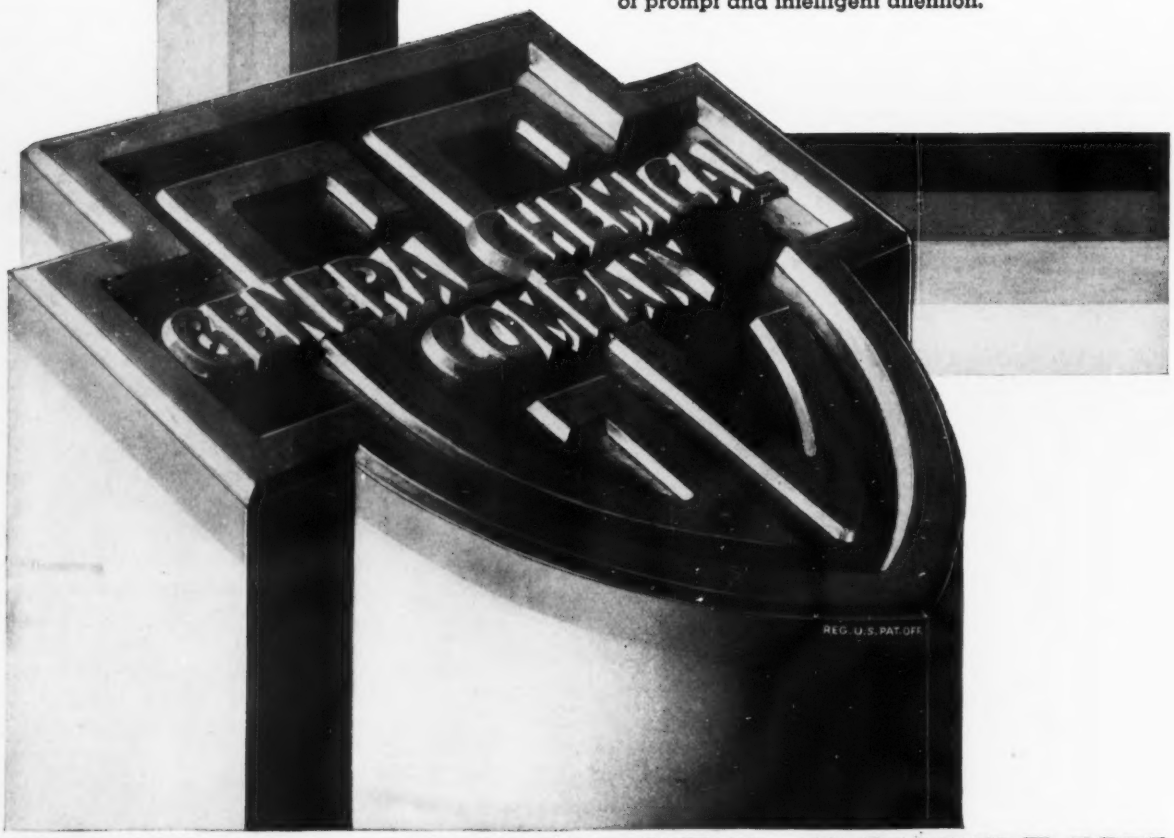
HEAVY CHEMICALS
OF STANDARD PURITY

Sodium Silicate

Clear and Opalescent—Standard Strengths

Also: **NITRE CAKE, SALT CAKE, BARIUM CARBONATE, TRISODIUM PHOSPHATE, SODIUM FLUORIDE, SODIUM SULPHITE, HEAVY ACIDS and INDUSTRIAL CHEMICALS**

GENERAL CHEMICAL COMPANY manufacture plus nation-wide service makes this not only a logical, but an advantageous source of supply. The Company invites your inquiry which, in your interest as well as ours, should be addressed to the sales office nearest you. We assure you of prompt and intelligent attention.



GENERAL CHEMICAL COMPANY

Home Office: 40 RECTOR ST., NEW YORK (Cable Address: Lycurgus, N. Y.)

Sales Offices: ATLANTA, BALTIMORE, BOSTON, BUFFALO, CHARLOTTE, CHICAGO, CLEVELAND, DENVER, KANSAS CITY, LOS ANGELES, MINNEAPOLIS PHILADELPHIA, PITTSBURGH, PROVIDENCE, SAN FRANCISCO, ST. LOUIS. In Canada: THE NICHOLS CHEMICAL CO., LTD., MONTREAL, TORONTO

Soap Sales Story

A soap sales story which happened on June 8, 1936, is reported by W. F. Schaphorst, Newark, N. J. engineer. He tells it as follows:

"I was talking about engineering matters with the owner of a large Newark manufacturing concern, in the 'front office', when in walked a man with a heavy basket containing cans of something.

"'What do you want?' snapped the owner who is a very busy man, so busy that while conversing with me he was eating his lunch.

"'Will you let me go in your plant to sell this soap to your men?' the man asked.

"'You can't sell that soap in here', the owner replied. 'Nobody will buy it. It dries up before it is half used'.

"'But I just sold a can to one of the men through a window', was the salesman's effective come-back, and then he launched forth with a sales talk that convinced the owner himself to the extent that he dug down into his pocket and bought a can for his own use.

"'All right', he said, with a wave of his hand, 'Go ahead and try to sell em'. In a few minutes the salesman returned, and I noticed his basket was empty."

Foreign Trade Inquiries

A concern in London, England, is interested in purchase of or agency for sale of American toilet soaps. Interested firms may communicate through the U. S. Bureau of Foreign & Domestic Commerce, Washington, D. C., mentioning inquiry No. 955. A concern in Santiago, Chile, wants to purchase or secure an agency for sale of American cleaning and waxing materials. Inquiry No. 881.

Germany Gets Soya Beans

The new trade agreement signed between Germany and Manchukuo provides Germany with £6,000,000 worth of soya beans per annum, and so great is the need for raw fats that the Reichsbank is to pay cash for three-quarters of this sum, the remainder being made up in German products. The chief value of the soya bean is connected with the production of bread, cattle food, milk, linoleum, enamels and soap. Germany will have the option to re-export a proportion of the beans and to increase the payment in goods to £2,200,000. The agreement is for one year from June 1st, but it may be extended.

Fish Oil Plant on Coast

The new plant being constructed at Tacoma, Wash., by Pennsylvania Salt Mfg. Co., Tacoma, and Wyandotte Oil & Fat Co., Wyandotte, Mich., will be used exclusively for the hydrogenation of fish oils according to a notice from the former company, and not in the production of soap as indicated in our report in the April issue of SOAP. Construction will get under way this spring and the plant when completed will be operated by the Wypenn Co., a new corporation of Washington. When it goes into operation it is expected that much of the fish oil now processed in the east will be taken care of by the new Tacoma plant.

Parento Names Dunstan

Compagnie Parento, Inc., Croton-on-Hudson, N. Y., announces the appointment of Howard A. Dunstan as sales representative. Mr. Dunstan has been connected with Compagnie Parento for over seven years. His first position with the company was as an assistant in the laboratories where he has acquired considerable experience and knowledge in perfume chemistry. Mr. Dunstan will call on the trade in the New York, New Jersey and New England territories and will make his headquarters at the New York City Office of Compagnie Parento, 507 Fifth Avenue.

MacDonald Jr. Arrives

George Robert MacDonald, New England representative for Ungerer & Co., New York, essential oils, is the father of a young son, George Robert, Jr.

Form Excel Soap Co.

A new concern has been organized in Detroit by Donald A. Grimson under the name Excel Soap Co. The plant is located at 6325 Maxwell Ave.

To Sell "Parapet" Soap

Paramount Products Co., makers of "Parapet" soap, has named Taft & Suydam, Inc., to handle sales in the San Francisco district.

A. O. Chemists Elect

E. C. Ainslie, of Atlanta, Ga., was elected president of the American Oil Chemists' Society, in the closing session of that organization's annual meeting in New Orleans, June 3rd. He succeeds A. A. Robinson, of Chicago. Other officers named included: M. L. Sheely, of Chicago, first vice-president; T. C. Law, of Atlanta, Ga., second vice-president; J. J. Canucheau, of New Orleans, third vice-president; C. P. Long, Cincinnati, fourth vice-president and chairman of the soap division; and, J. C. Helm, New Orleans, secretary-treasurer.

Fritzsche Office Photos

Fritzsche Bros., Inc., New York, essential oils and aromatic products, just completing their sixty-fifth year, have issued a leather bound book of photographs of the new Fritzsche offices to mark this anniversary. The move to the new offices in the Port Authority Building was made about eight months ago following a spectacular fire at the old offices on Beekman St. Photographs of the new quarters are by Margaret Bourke-White, and show the private quarters of the officials and views in the plant and laboratories, as well as general office scenes.

Form Soap Concern

Wissell Soap & Chemical Co., 1726 Andina Ave., Cincinnati, has just been organized by F. J. Wissell, Robert Brown, Fred Willis and J. K. Taylor.

WARNER Quality
PIONEERED FOR NEARLY 50 YEARS
CAUSTIC SODA
HIGHEST GRADE
(ELECTROLYTIC)
IN EITHER
FLAKE, SOLID OR LIQUID FORM
CARBON TETRACHLORIDE
REDISTILLED WATER-WHITE
SUPPLIED ALSO IN COMBINATION WITH OTHER SOLVENTS TO MEET INDIVIDUAL REQUIREMENTS
EARLIEST PRODUCTION IN THIS COUNTRY
TRI-SODIUM PHOSPHATE
FIRST PRODUCER OF A FREE-FLOWING AND NON-CAKING PRODUCT NATIONALLY KNOWN FOR ITS UNIFORM QUALITY
TETRA SODIUM PYRO PHOSPHATE
AN OPPORTUNITY TO SUBMIT SAMPLES AND QUOTATIONS IS SOLICITED

STANDARD WARNER CHEMICALS

WARNER CHEMICAL COMPANY

Pioneer Producers 1886

CHRYSLER BUILDING
155 EAST SUPERIOR STREET, CHICAGO

NEW YORK CITY
70 RICKARD STREET, SAN FRANCISCO

DIVISION OF WESTVACO CHLORINE PRODUCTS

Soap Trade in Brazil

The manufacture of soap in Brazil is still for the most part in a rather undeveloped stage, although there are some large and up to date factories in one or two of the largest cities. A peculiarity of the soap trade in Brazil is the marked preference for transparent soaps, irrespective of quality. There is a fair amount of trade in the better classes of imported toilet soap. There is a great wealth of oleaginous trees and plants in Brazil so that there should be no lack of raw material for soap-making. But apart from the babassu and ukuhaba fats, derived from the fruit of native trees of that name, these resources have so far been little developed.

A. H. Ross Visits Mexico

A. H. Ross, sales manager for R. A. Jones & Co., Cincinnati, is spending a fortnight in Mexico City and the adjacent territory where his company does a substantial business in automatic soap presses and packaging equipment.

New Fritzsche Aromatics

Fritzsche Bros., Inc., New York, have just introduced several new aromatic products one of which, phenyl propyl aldehyde, or hydrocinnamic aldehyde as it is sometimes called, is said to be a valuable soap aromatic. It can be used as a blending agent with floral odors or in combination with heavier odors for the production of new oriental bouquets. Another new Fritzsche product is "Antox", a preservative and anti-oxidant for soaps, fats and oils. It can be added to the oils before saponification or by milling into the finished soap in the same manner perfume is incorporated. One-tenth of one per cent is given as the correct proportion for use in solid soaps.

In Charge of Colgate Display

Helen Sparrow, graduate of the New York School of Display, has been placed in charge of display for the Premium Stores of Colgate-Palmolive Peet Co.

Contracts Awarded

Laundry Supply Bids

Armour & Co., Chicago, were low bidders on 5,000 lbs. powdered soap for the Jeffersonville U. S. Army Quartermaster in a recent bidding with a quotation of 5.33c. The same concern entered the low bid of 5.098c on 15,000 lbs. chip soap.

Chicago Soap Awards

A contract for 240,000 lbs. laundry soap has recently been awarded to Armour & Co., Chicago, by the Chicago U. S. Army Quartermaster at a price of 2.99c. The same concern received a contract for 5,000 cakes toilet soap at 2.24c. John Sexton & Co., Chicago, received the award on 15,000 cakes grit soap.

Jeffersonville Soap & Polish

A contract covering 10,000 cakes of stove polish has just been awarded to Joseph Dixon Crucible Co., Jersey City, N. J., in a bidding opened by the Jeffersonville U. S. Army Quartermaster. The successful bid was 3.8c per cake. Hunnewell Soap Co., Cincinnati, awarded 19,329 11-oz. cakes of grit soap at 1.9c.

Naphthalene Award

A contract covering 17,000 lbs. flake naphthalene has just been awarded to Grasselli Chemical Co., Cleveland, for delivery to the Chicago U. S. Army Quartermaster. The bid entered by Grasselli was 7¼c per lb.

Laundry Supplies

Contracts have recently been awarded as follows in a bidding opened by the Chicago U. S. Army Quartermaster for laundry supplies: Colgate - Palmolive - Peet Co., Jersey City, 8,000 lbs. soap, 5.97c; H. H. Rosenthal Co., N. Y. C., 7,560 lbs. washing soda, 2.4c; Armour & Co., 6,000 lbs. soap, 5.473c; Iowa Soap Co., Burlington, Iowa, 13,650 lbs. soap, 5.05c; and Detroit Soda Products Co., Washington, 17,920 lbs. soda, 1.95c.

Cleaning Compound Bids

Crystal Soap & Chemical Co., Philadelphia, was low bidder on 1,375 lbs. cleaning compound in a bidding recently opened by the Washington, D. C., U. S. Marine Corps, entering a price of 3.8c lb.

Govt. Contract Requirements

The Walsh-Healy Bill just passed by Congress provides that on all future contracts for materials purchased by the government the supplier must stipulate in regard to materials supplied:

(a) That the contractor is the manufacturer or a regular dealer therein.

(b) That labor will be paid not less than the minimum wages determined by the Secretary of Labor to be the prevailing minimum for the industry in the locality, where the materials, etc. are manufactured or furnished.

(c) That labor shall not work more than 8 hours in any one day or in excess of 40 hours in any one week.

(d) No male person under 16 years of age, no female person under 18, and no convict labor shall be employed.

(e) Contract shall not be performed under working conditions which are unsanitary or hazardous or dangerous to health and safety of employees engaged in the performance thereof.

Chemical Formulary—Vol. 3

Volume III of the Chemical Formulary, reviewed in the June issue of *Soap*, is not a revised edition of the previous printing, we are advised, but a separate volume entirely, containing no duplicates or formulae appearing in Volumes I and II.

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CALCIUM CHLORIDE
CARBON TETRACHLORIDE
CAUSTIC SODA
CAUSTIC POTASH
DYES
DIBODIUM PHOSPHATE
GLAUBERS SALTS
GLYCERINE
METASILCATE
OXALIC ACID
POTASSIUM CARBONATE
SAL AMMONIAC
SALT
SAL SODA
SILICATE OF SODA
SODA ASH
TRISODIUM PHOSPHATE

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NEATSFOOT OIL
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OLIVE OIL
OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPESEED OIL
ROSIN
SALAD OIL
SOYA BEAN OIL
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STEARIC ACID
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New Trade Marks

The following trade-marks were published in the June issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

AEROMIX—This in solid letters describing cleaning preparation. Filed by Midway Chemical Co., Chicago, Oct. 2, 1935. Claims use since Apr. 9, 1931.

DART—This in solid letters with arrow describing soap, polish, cleaning fluid, cleanser, etc. Filed by S. H. Kress & Co., New York, Oct. 5, 1935. Claims use since June 1, 1935.

CALADE—This in solid letters describing detergent. Filed by Calgon, Inc., Pittsburgh, Oct. 17, 1935. Claims use since Sept. 19, 1935.

CALUM—This in solid letters describing detergent. Filed by Calgon, Inc., Pittsburgh, Oct. 17, 1935. Claims use since Sept. 19, 1935.

SOLVENTOL—This in solid letters describing cleaning compound. Filed by Horace Thurber, Clarenden, Va., Jan. 3, 1936. Claims use since December, 1934.

HYGIEATOR — This in shaded letters describing liquid hand soap, shaving soap and shampoo. Filed by Altoona Beauty & Barber Supply Co., Altoona, Pa., Jan. 22, 1936. Claims use since December, 1898.

TRIOX—This in solid letters describing cleaning compounds. Filed by Industrial Chemical Co., Sheridan, Ind., Mar. 12, 1936. Claims use since Aug. 1, 1935.

SILHOUETTE OF FEMALE HEAD —Describing toilet and bath soap. Filed by Procter & Gamble Co., Cincinnati, Mar. 13, 1936. Claims use since Apr. 5, 1932.

WORTH-LE—This in solid letters with sketch of playing card Knave describing liquid metal polish. Filed by Worth-Le Products, Port Ewen, N. Y., Apr. 4, 1936. Claims use since Feb. 20, 1936.

RED CAP—This in solid letters describing windshield cleaner. Filed by C. M. Kimball Co., Everett, Mass., Apr. 7, 1936. Claims use since Feb. 24, 1936.

HALITOSINE—This in outline letters describing shaving cream. Filed by Halitosine Co., St. Louis, Apr. 8, 1936. Claims use since Jan. 15, 1936.

NOMUS—This in solid letters describing silver polish. Filed by Rodwood Products, Inc., New York, Apr. 21, 1936. Claims use since Apr. 6, 1936.

ZINCORA—This in solid letters describing tooth powder, mouth wash, etc. Filed by Park Drug Co., New York, Apr. 10, 1936. Claims use since May, 1925.

PIONEER—This in solid letters describing insecticides. Filed by American Gypsum Co., Port Clinton, Ohio, Apr. 28, 1936. Claims use since Apr. 16, 1936.

CASCADE—This in solid letters with sketch of waterfall describing polishing wax. Filed by Cascade Outing Supply Co., Seattle, Wash., Jan. 27, 1936. Claims use since Sept. 15, 1934.

NOWASA—This is solid letters describing hand cleaner. Filed by Stanco, Inc., New York, Feb. 25, 1936. Claims use since Jan. 15, 1936.

PURG-ALL—This in tooled letters describing cleaning compound for floors. Filed by Warren Refining & Chemical Co., Cleveland, Apr. 10, 1936. Claims use since Oct. 1, 1933.

FROSTERILIZE—This in shaded letters describing insecticides, disinfectants, fumigants, etc. Filed by Gordon G. Clark, Springfield, Mass., Jan. 10, 1936. Claims use since July 1, 1934.

MYCOVAPE—This in solid letters describing insecticides. Filed by Masury-Young Co., Charlestown, Mass., Feb. 14, 1936. Claims use since Jan. 1, 1936.

TAVERN—This in old English type describing furniture polish, floor wax, cleaning compound, polishing pad, etc. Filed by Socony-Vacuum Oil Co., New York, April 16, 1936. Claims use since April 2, 1936.

BIG-POL—This in solid letters with sketch of parrot describing shoe polishes. Filed by Polyshine, Inc., Rochester, N. Y., Mar. 31, 1936. Claims use since Mar. 13, 1936.

GREEN ARROW—This in solid letters on arrow describing soap and soap chips. Filed by Colgate-Palmolive-Peet Co., Jersey City, Apr. 17, 1936. Claims use since June 26, 1920.

R P O—This in shaded letters describing deodorant. Filed by Better Drug Products, Inc., Tulsa, Okla., Mar. 14, 1936. Claims use since October, 1935.

LE DORSI—This in script describing shampoo. Filed by Doris Drake, New York, Mar. 28, 1936. Claims use since Mar. 1, 1934.

WONDERINE SOLUTION — This in solid letters describing bleaching, cleaning, deodorizing and disinfecting preparation. Filed by Wonderine Co., Milwaukee, Mar. 28, 1936. Claims use since Sept. 10, 1932.

MEL-O-GLO POLISH—This on reverse plate describing polish. Filed by C. W. Davis & Sons, Washington, D. C., Dec. 6, 1935. Claims use since 1933.

Trade Marks Granted

336,008. Wax Polish. Eez-On Products Co., Campgaw, N. J. Filed January 2, 1936. Serial No. 373,243. Published April 14, 1936. Class 16.

336,027. Industrial Chemical Products Co., Detroit. Filed September 20, 1935. Serial No. 369,533. Published April 7, 1936. Class 4.

336,035. Shaving Cream and Soap. Continental Blade Corp., Brooklyn. Filed December 28, 1934. Serial No. 359,712. Published March 5, 1935. Class 4.

KRANICH SOAPS

LIQUID SHAMPOO BASE
Coco Oil 60%
Olive Oil 60%
Natural, Opal, Green

LIQUID SOAPS
Coconut..10%-15%
20%-40% Concentrate
Colored and Perfumed

SCRUBBING SOAPS
Pine-Sassafras
Plain

LIQUID SHAMPOOS
Coconut Oil-30%-45%
Olive Oil-30%
Castile-30%

POWDERED SOAPS
Castile U.S.P.
Coco Castile 50-50
Pure Coconut
Pure Palm

POTASH SOAPS
Soft and Hard
U.S.P. 9th and 10th

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Kranich Standard Soaps are manufactured and produced entirely in our own factory. All our oils and fats are processed and purified before use. All alkalies are dissolved and settled to remove impurities. All our processes are technically supervised and a chemical analysis made on all finished products to assure satisfaction to our trade.

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336,071. Shaving Cream, Shaving Sticks, Shaving Powder, Outfit Packages Containing Soap and Towel, etc. Shulton, Inc., New York. Filed February 18, 1936. Serial No. 374,986. Published April 7, 1936. Class 4.

336,076. Detergent for Cleaning Automobile Bodies. Glitter Products, Inc., Detroit. Filed February 6, 1936. Serial No. 374,557. Published April 7, 1936. Class 4.

336,097. Preparation for Polishing Floors, Furniture and Like Surfaces. Floor Maintenance Bureau, Inc., Newark, N. J. Filed November 4, 1935. Serial No. 371,147. Published April 14, 1936. Class 16.

336,100. Cleansers, Liquid Soaps, Sweeping Compounds, and General Cleaning Compounds. Creco Co., Long Island City, N. Y. Filed October 9, 1935. Serial No. 370,174. Published April 7, 1936. Class 4.

335,106. Insecticides. Odora Co., New York. Filed December 21, 1935. Serial No. 372,942. Published March 10, 1936. Class 6.

335,310. Shampoo. Henry W. Hilker, San Francisco. Filed September 7, 1935. Serial No. 369,082. Published March 24, 1936. Class 6.

335,333. Shampoo for Dogs. Jennie M. Sokolinski, Brooklyn. Filed January 28, 1936. Serial No. 374,216. Published March 17, 1936. Class 6.

335,345. Antiseptics, Germicides, and Deodorants. Bethlehem Laboratories, Pittsburgh. Filed December 23, 1935. Serial No. 372,951. Published March 17, 1936. Class 6.

335,346. Antiseptics, Germicides and Deodorants. Bethlehem Laboratories, Pittsburgh. Filed December 23, 1935. Serial No. 372,952. Published March 17, 1936. Class 6.

335,404. Cream Polish, Oil Polish, and Polishing Wax. Sears, Roebuck and Co., Chicago. Filed February 7, 1936. Serial No. 374,604. Published March 24, 1936. Class 16.

335,436. Shoe Polish and Dry Cleaners. Nebb Products Corp., New York. Filed January 10, 1936. Serial No. 373,537. Published March 17, 1936. Class 4.

335,572. Toilet Soap and Shaving Soap. Twin Products Co., Los Angeles. Filed December 7, 1935. Serial No. 372,353. Published March 31, 1936. Class 4.

335,583. Polish and Cleaner. Martin J. Cabana, Inc., Buffalo. Filed February 6, 1936. Serial No. 374,550. Published March 31, 1936. Class 16.

335,588. Preparation for Cleaning, Washing, and Polishing Natural and Artificial Denture. Wernet Dental Mfg. Co., Brooklyn. Filed February 4, 1936. Serial No. 374,449. Published March 24, 1936. Class 4.

335,606. Toothpowder. Campus Co., Dodge City, Kans. Filed October 12, 1935. Serial No. 370,446. Published March 31, 1936. Class 6.

No. 355,667. Soap. M. Werk Co., St. Bernard, Ohio. Filed January 22, 1936. Serial No. 373,983. Published March 24, 1936. Class 4.

335,773. Dentifrice. W. A. Shenton & Co., Jersey City, N. J. Filed January 9, 1936. Serial No. 373,503. Published April 7, 1936. Class 6.

335,775. Shampoo. Three Crowns Laboratory, Fifth Avenue, Waterloo, Iowa. Filed January 8, 1936. Serial No. 373,473. Published April 7, 1936. Class 6.

335,785. Polishing Material. Glitter Products, Inc., Detroit. Filed February 6, 1936. Serial No. 374,558. Published April 7, 1936. Class 16.

335,853. Toothpaste, Tooth Powders, Mouth Washes. Vadsco Sales Corp., Long Island City, N. Y. Filed January 28, 1936. Serial No. 374,219. Published April 7, 1936. Class 6.

Louisiana Drug Bill

A bill has recently been passed by the Louisiana House and favorably reported by the Senate of that state which follows closely the general provisions of Federal Bill S-5 just thrown into the discard by Congress before adjournment. The Louisiana bill has the added provision of requiring registration of all foods, drugs, cosmetics, etc., sold within the state at an annual fee of five dollars for each product. It would also give arbitrary power to the Louisiana State Board of Health to prevent sale of any product within the state.

C. S. A. Members Golf

The first summer golf tournament of the Chemical Salesmen's Association was held at the Baltusrol Golf Club, Short Hills, N. J., June 16, with 89 entries reported for the largest turnout on record. The list of prize winners was overshadowed by a non-winner, Robert L. Harmon of Evans, Nye & Harmon, Inc., who scored a hole-in-one on the 170-yard third hole. Official winners were listed as follows:

Class A: 1st—Chas. E. Kelly, Hagerty Bros. 2nd—F. M. Moffatt, Jr., U. S. Industrial Chem. Co. 3rd—E. A. Orem, DuPont-Grasselli.

Class B: 1st—J. J. Kerrigan, Merck & Co. 2nd—T. S. Nichols, DuPont-Grasselli. 3rd—M. D. Reeser, Howes Publishing Co.

Kickers: 1st—E. S. Burke, Edw. S. Burke Co. 2nd—Walter Buehler, Barrett Company. 3rd—Henry Herrmann, General Dyestuffs Corp. 4th—R. E. Dorland, Dow Chemical Company.

Guest Kickers: J. P. Tuttle, Jr., International Printing Ink Corp.

Lowest Number of Putts: Rupert Lowe, Bakelite Corp.

Fritzsche Head Sails

F. H. Leonhardt, president of Fritzsche Bros., Inc., New York, sailed from New York on the *S. S. Rex*, June 27, on a three months' European trip. He was accompanied by Mrs. Leonhardt and their daughter and planned to visit Spain, France, Germany, Austria, Italy, Switzerland, Morocco, Holland and England. A short visit to the Fritzsche plant at Seillans, France was included in the itinerary. Mr. Leonhardt also planned to visit the essential oil producing regions of other countries.

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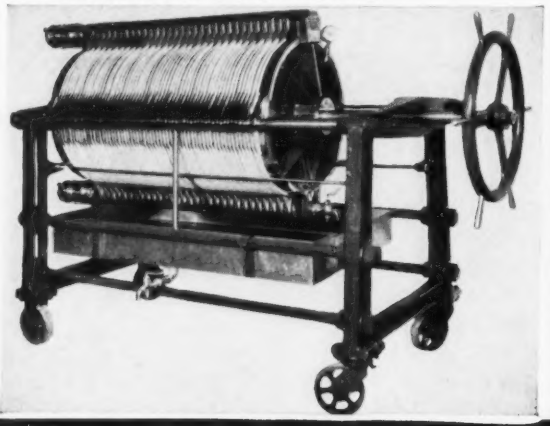

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Raw Material Markets

(As of June 27, 1936)

NEW YORK—The principal development in soap raw material markets over the past month has been the passage of the Bailey amendment to the revenue act by the U. S. Congress. The most important point in the new measure, so far as the soap industry is concerned, is the three cent per pound excise tax on imported tallow. With the expectation that the Bailey amendment would be passed, users of tallow started several weeks ago to bid up the domestic tallow market and in consequence there has been a rise in tallow prices of a cent and a quarter per pound over the past few weeks. Grease has also advanced approximately the same amount.

Tallow imports have been very heavy over the past two years as a consequence of the drought and the domestic program of raising fat prices. In recent weeks, however, imports have practically ceased as the world market has been above a parity with the domestic price level. It seems now that it will be a long time before this country offers much of a market again for foreign tallow, as the three cent barrier should effectively shut out imports under any normal conditions.

As originally drafted the Bailey amendment carried a 4½c per pound excise tax on imports of denatured olive oil and olive oil foots. This would have meant a heavy increase in costs for users of these raw materials in soaps and textile preparations. Before passage of the amendment, however, the clauses taxing these oils were removed, so olive oil will continue to enjoy its untaxed status as a soap raw material.

One development during the period which interfered with the activities of essential oil dealers was the weakness of the French franc which followed installation of the new French government. With uncertainty prevailing as to the possibility of devaluation, trading in French oils was of course impeded.

OILS AND FATS

Coconut Oil

In spite of the fact that buyers are believed to be carrying light stocks of coconut oil, there was little interest shown in this market during the period just closed. Instead the soap trade was showing much more interest in tallow. Coconut oil prices were steady and unchanged through the period.

Grease

Influenced by the sharp advance in tallow prices this period, greases also moved up the scale, advancing as much as a cent a pound. House and yellow grease are now quoted at 4⅜ to 4⅝c per pound.

Olive Oil

The olive oil market quieted down this period after the flurry last month occasioned by the proposal to tax imports of denatured oil and foots at the rate of 4½c per pound. When this section of the Bailey amendment was deleted there were many sighs of relief from users of these raw materials in the soap and textile specialty fields.

Palm Oil

There was an easier tone in the palm oil market and offerings of spot oil were reported at 4c per pound.

Tallow

Tallow prices advanced steadily all through the period, closing with a net gain of a cent and a quarter per pound over the past four weeks, bringing the current quotation on city extra to 5⅜c per pound. There was an increase in inquiries made by soap makers, with offerings reported light. Figures for the first four months of the current year show a sharp decline in imports of foreign tallow this year. Only 17,314,274 lbs. were brought in as compared with 67,000,000 lbs. in the same period last year. In recent weeks imported tallow has been held above a parity with domestic prices. When the new 3c tax is applied the margin will be made even greater.

PERFUMING MATERIALS

Anise Oil

With shipment oil from the primary market again being offered, spot quotations on anise have eased off slightly. The current market level is 56 to 59c per pound, a drop of four cents from a month ago.

Bergamot Oil

Removal of sanctions against Italy by Great Britain has lead to the belief that world trade in bergamot and the other Italian citrous oils will shortly show an increase. As a result the market has firmed up and the expectation is for continued strength.

Cassia Oil

Competition in the cassia oil market resulted in a decline of 5c per pound this period, with the inside price now being 95c and the range extending up to $1.10.

Citronella Oil

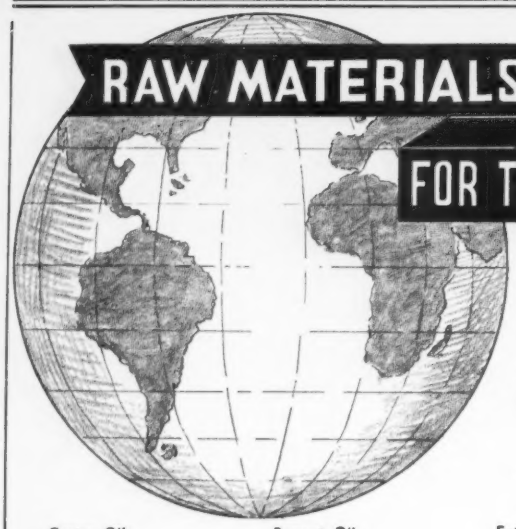
Java oil was reduced a cent a pound this period and is now quoted on the basis of 30 to 31c per pound in drums. Ceylon prices were unchanged.

Lemongrass Oil

Lower prices quoted recently in the primary market have lead to a reduction in spot quotations on lemongrass oil. Offerings are currently being made at 43 to 45c per pound.

COAL-TAR PRODUCTS

The shortage in cresylic acid still continues to be acute. Current production is being taken by users as fast as material is available, making it impossible for producers to catch up on stocks. Prices in this situation are strictly nominal.



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Tallow
Grease
Lanolin
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Raw Material Prices

(As of June 27, 1936)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums ..... lb.	$ .11	$ .12½
Acid, Boric, bbls., 99½% ..... ton	95.00	100.00
Cresylic, drums ..... gal.	.63	.65
Low boiling grade ..... gal.	.73	.75
Oxalic, bbls. ..... lb.	.11½	.12¼
Adeps Lanae, hydrous, bbls. ..... lb.	.16	.18
Anhydrous, bbls. ..... lb.	.17	.19
Alcohol, Ethyl, U. S. P., bbls. ..... gal.	4.13	4.25
Complete Denat., SD 1, drums, ex. gal.	.33	.43
Alum. Potash lump ..... lb.	.03¼	.03½
Ammonia Water, 26°, drums, wks. ..lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls. ..lb.	.08	.12½
Bleaching Powder, drums ..... 100 lb.	2.25	2.60
Borax, pd., cryst., bbls., kegs ..... ton	50.00	55.00
Carbon Tetrachloride, car lots ..... lb.	—	.05¼
L. C. L. ..... lb.	.07	.08½
Caustic, see Soda Caustic, Potash Caustic		
China Clay, filler ..... ton	10.00	25.00
Cresol, U. S. P., drums ..... lb.	.11	.11½
Creosote Oil ..... gal.	.11½	.12½
Feldspar ..... ton (200 to 325 mesh)	14.00	15.00
Formaldehyde, bbls. ..... lb.	.06	.07
Fullers Earth ..... ton	15.00	24.00
Glycerine, C. P., drums ..... lb.	.14½	.15
Dynamite, drums ..... lb.	.14½	.15
Saponification, drums ..... lb.	.11¼	.12¼
Soap lye, drums ..... lb.	.10¼	.10¾
Hexalin, drums ..... lb.	—	.30
Kieselguhr, bags ..... ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls. ..... per bbl.	1.70	2.20
Mercury Bichloride, kegs ..... lb.	.71	.76
Naphthalene, ref. flakes, bbls. ..... lb.	.07¼	.07½
Nitrobenzene (Myrbane) drums .... lb.	.09	.11
Paradichlorbenzene, bbls., kegs ..... lb.	.16	.25
Petrolatum, bbls. (as to color) ..... lb.	.02	.07¼
Phenol, (Carbolic Acid), drums ..... lb.	.14¼	.16
Pine Oil, bbls. ..... gal.	.59	.64
Potash, Caustic, drums ..... lb.	.06¼	.06½
Flake ..... lb.	.07	.07¼
Potassium Carbonate, solid ..... lb.	.07¼	.09½
Liquid ..... lb.	.03½	.03¾
Pumice Stone, powder ..... 100 lb.	3.00	4.00
Rosins (600 lb. bbls. gross for net)—		
Grade B to H, basis 280 lbs. ..... bbl.	5.25	6.00
Grade K to N ..... bbl.	6.05	6.15
Grade WG and X ..... bbl.	6.25	6.40
Wood FF Spot ..... bbl.	5.42	6.45
Rotten Stone, pwd. bbls. ..... lb.	.02½	.04½
Silica ..... ton	20.00	27.00
Soap, Mottled ..... lb.	.04⅛	.04⅜
Olive Castile, bars ..... lb.	.13	.19
powder. ..... lb.	.23	.30
Olive Oil Foot ..... lb.	.07	.07½
Powdered White, U. S. P. ..... lb.	.19	.21
Green, U. S. P. ..... lb.	.06½	.08
Tallow Chips ..... lb.	.07¼	.07¾
Whale Oil, bbls. ..... lb.	.05	.06
Soda Ash, cont., wks., bags, bbls. 100 lb.	1.23	1.50
Car lots, in bulk ..... 100 lb.	—	$1.05
Soda Caustic, cont., wks., sld. ... 100 lb.	—	2.60
Flake ..... 100 lb.	—	3.00
Liquid, tanks ..... 100 lb.	—	2.25
Soda Sal., bbls. ..... 100 lb.	1.10	1.30
Sodium Chloride (Salt) ..... ton	11.40	14.00
Sodium Fluoride, bbls. ..... lb.	.07¼	.08¾
Sodium Hydrosulphite, bbls. ..... lb.	.19	.20
Sodium Silicate, 40 deg., drum .. 100 lb.	.80	1.20
Drums, 52 deg. wks. ..... 100 lb.	1.35	1.75
Tar Acid Oils, 15-25% ..... gal.	.21	.24
Trisodium Phosphate, bags, bbls. ... lb.	.03	.03½
Zinc Oxide, lead free ..... lb.	.06	.06¼
Zinc Stearate, bbls. ..... lb.	.20	.22

Oils — Fats — Greases

Castor, No. 1, bbls. ..... lb.	.10¾	.11½
No. 3, bbls. ..... lb.	.10¼	.11
Coconut		
Manila, tanks, N. Y. ..... lb.	—	.04
Tank, Pacific coast ..... lb.	.03¾	.03⅞
Cod, Newfoundland, bbls. ..... gal.	.40	Nom.
Copra, bulk, coast ..... lb.	.0230	.0232
Corn, tanks, mills ..... lb.	.08	.08⅛
Cottonseed, crude, tanks, mill ..... lb.	.08	.08¼
PSY ..... lb.	.09	.09¼
Degras, Amer., bbls. ..... lb.	.05¼	.06
English, bbls. ..... lb.	.04¾	.05¼
Neutral, bbls. ..... lb.	.08½	.10½
Greases, choice white bbls., N. Y. ... lb.	.05	.06½
Yellow ..... lb.	.04⅜	.04⅝
House ..... lb.	.04⅜	.04⅝
Lard, City ..... lb.	.10½	.10¾
Compound tierces ..... lb.	.10¾	.11
Lard Oil,		
Extra, bbls. ..... lb.	—	.09¾
Extra, No. 1, bbls. ..... lb.	—	.08
No. 2, bbls. ..... lb.	—	.07½
Linseed, raw, bbls., spot ..... lb.	.0950	.0990
Tanks, raw ..... lb.	.0890	.0930
Boiled, 5 bbls. lots ..... lb.	.1030	.1070
Menhaden, Crude, tanks, Balt. ..... gal.	.32	.33
Oleo Oil, No. 1, bbls., N. Y. ..... lb.	—	.09¼
No. 2 , bbls., N. Y. ..... lb.	—	.08¾
Olive, denatured, bbls., N. Y. ..... gal.	.75	.76
Foots, bbls., N. Y. ..... lb.	.08	.08¼
Palm ..... lb.	.04	.04⅛
Palm Kernel, casks, denatured ..... lb.	.04⅞	Nom.
Peanut, domestic tanks ..... lb.	.08¼	.08½
Red Oil, distilled bbls. ..... lb.	.08⅝	.09⅝
Saponified bbls ..... lb.	.08⅝	.09⅝
Tanks ..... lb.	—	.07¾
Soya Bean, domestic tanks, N. Y. ..... lb.	—	.07
Stearic Acid,		
Double pressed ..... lb.	.08½	.09½
Triple pressed, bgs. ..... lb.	.11¼	.12¼
Stearine, oleo, bbls. ..... lb.	.07	.07¼
Tallow, special, f.o.b. plant ..... lb.	—	.05¼
City, ex. loose, f.o.b. plant ..... lb.	—	.05⅜
Tallow, oils, acidless, tanks, N. Y. ... lb.	—	.07¼
Bbls., c/l N. Y. ..... lb.	—	.07¾
Whale, refined ..... lb.	.07¾	.08

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Almond, Bitter, U. S. P.	lb.	$2.00	$2.50
Bitter, F. F. P. A.	lb.	2.25	2.75
Sweet, cans	lb.	.58	.60
Anise, cans U. S. P.	lb.	.56	.59
Bay tins		1.25	1.50
Bergamot, coppers	lb.	1.90	2.30
Artificial	lb.	1.00	1.30
Birch Tar, rect. tins	lb.	.75	.80
Crude, tins	lb.	.14	.16
Bois de Rose, Brazilian	lb.	1.25	1.40
Cayenne	lb.	2.30	2.50
Cade, cans	lb.	.26	.30
Cajeput, native, tins	lb.	.45	.46
Calamus, tins	lb.	3.25	3.50
Camphor, Sassy, drums	lb.	13½	.14
White, drums	lb.	.14½	.15
Cananga, native, tins	lb.	2.30	2.35
Rectified, tins	lb.	2.60	2.65
Caraway Seed	lb.	2.00	2.25
Cassia, Redistilled, U. S. P.	lb.	.95	1.10
Cedar Leaf, tins	lb.	.90	1.00
Cedar Wood, light, drums	lb.	.18	.22
Citronella, Java, drums	lb.	.30	.31
Citronella, Ceylon, drums	lb.	.18	.19
Cloves, U. S. P., tins	lb.	—	1.00
Eucalyptus, Austl., U. S. P., cans	lb.	.34	.35
Fennel, U. S. P., tins	lb.	1.05	1.10
Geranium, African, cans	lb.	5.25	6.75
Bourbon, tins	lb.	5.50	7.00
Hemlock, tins	lb.	.70	.80
Lavender, U. S. P., tins	lb.	3.25	7.00
Spike, Spanish, cans	lb.	1.00	1.50
Lemon, Ital., U. S. P.	lb.	1.30	2.00
Lemongrass, native, cans	lb.	.43	.45
Linaloe, Mex., cases	lb.	1.25	1.30
Nutmeg, U. S. P., tins	lb.	1.20	1.35
Orange, Sweet W. Ind., tins	lb.	1.95	2.00
Italian cop	lb.	1.90	2.75
Distilled	lb.	—	.75
Origanum, cans, tech.	lb.	.70	.75
Patchouli	lb.	4.75	6.00
Pennyroyal, dom.	lb.	1.65	1.90
Imported	lb.	1.15	1.20
Peppermint, nat., cases	lb.	1.90	2.30
Redis., U. S. P., cans	lb.	2.10	2.50
Petit, grain, S. A., tins	lb.	1.00	1.15
Pine Needle, Siberian	lb.	.90	.95
Rose, Natural	oz.	5.25	18.00
Artificial	oz.	2.00	3.00
Rosemary, U. S. P., tins	lb.	.34	.45
Tech., lb. tins	lb.	.30	.40
Sandalwood, E. Ind., U. S. P.	lb.	4.80	5.50
Sassafras, U. S. P.	lb.	.75	1.00
Artificial	lb.	.37	.38
Spearmint, U. S. P.	lb.	1.40	1.50
Thyme, red, U. S. P.	lb.	.58	1.02
White, U. S. P.	lb.	.65	1.10
Vetivert, Bourbon	lb.	10.50	11.00
Ylang Ylang, Bourbon	lb.	4.60	7.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.25	$2.25
Amyl Cinnamic Aldehyde	lb.	1.55	2.00
Anethol	lb.	1.05	1.10
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.20	1.30
Benzyl, Acetate	lb.	.56	1.00
Alcohol	lb.	.65	1.15
Citral	lb.	2.00	2.30
Citronellal	lb.	2.05	2.50
Citronellol	lb.	1.90	2.15
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide		.70	1.00
Eucalyptol, U. S. P.	lb.	.50	.55
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	.75	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	2.00	2.50
Heliotropin	lb.	2.00	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.25	5.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.25
Linalyl Acetate	lb.	1.50	3.25
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.75
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	4.20	5.00
Ketone	lb.	4.35	5.25
Xylene	lb.	1.25	2.00
Phenylacetaldehyde	lb.	4.80	8.00
Phenylacetic Acid, 1 lb., bot.	lb.	2.50	3.25
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.00	4.50
Rhodinol	lb.	5.75	8.00
Safrol	lb.	.54	.57
Terpineol, C. P., 1,000 lb. drs.	lb.	.23	.25
Cans	lb.	.27	.30
Terpinyl Acetate, 25 lb. cans	lb.	.80	.90
Thymol, U. S. P.	lb.	1.40	1.50
Vanillin, U. S. P.	lb.	3.75	4.00
Yara Yara	lb.	1.30	2.00

Insecticide Materials

Insect powder, bbls.	lb.	.17	.18
Concentrated Extract			
5 to 1	gal.	1.25	1.30
20 to 1	gal.	4.25	4.50
30 to 1	gal.	6.25	6.45
Derris, powder—4%	lb.	.40	.42
Derris, powder—5%	lb.	.24	.48
Cube, powder—4%	lb.	.34	.37
Cube, powder—5%	lb.	.40	.42

Gums

Arabic, Amb. Sts.	lb.	.09¾	.10
White, powdered	lb.	.13	.14
Karaya, powdered No. 1	lb.	.09½	.10
Tragacanth, Aleppo, No. 1	lb.	1.25	1.30
Sorts	lb.	.30	.35

Waxes

Bees, white	lb.	.36	.38
African, bgs.	lb.	.25	.26
Refined, yel.	lb.	.28	.30
Candelilla, bgs.	lb.	.16	.16½
Carnauba, No. 1	lb.	.44	.45
No. 2, yel.	lb.	.42	.43
No. 3, chalky	lb.	.34	.35
Ceresin yellow	lb.	.36	.38
Paraffin, ref. 125-130	lb.	.04¼	.04½

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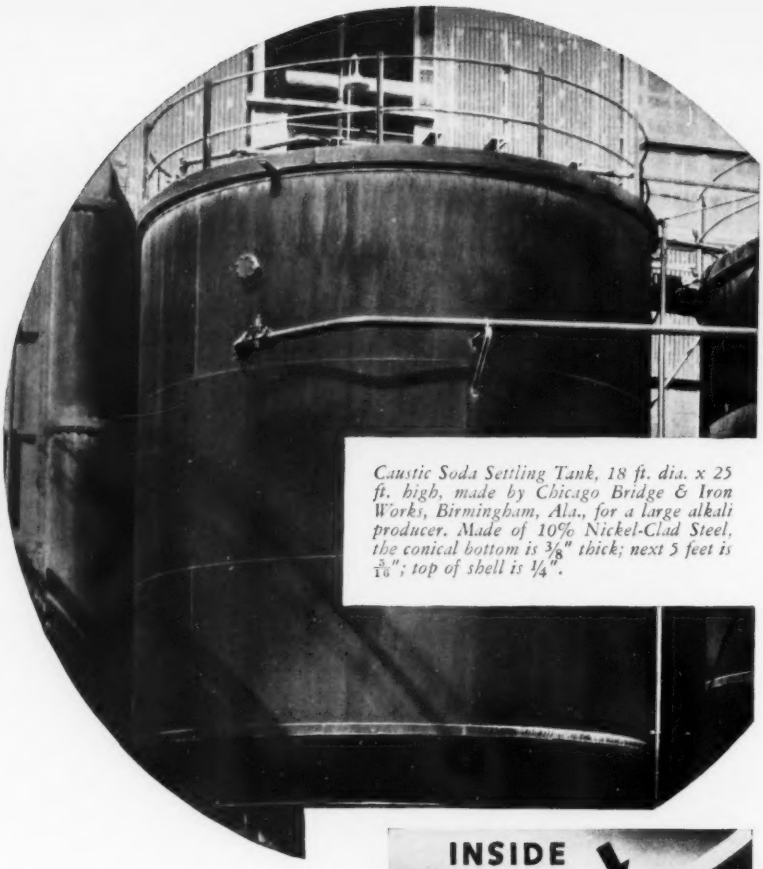

Caustic Soda Settling Tank, 18 ft. dia. x 25 ft. high, made by Chicago Bridge & Iron Works, Birmingham, Ala., for a large alkali producer. Made of 10% Nickel-Clad Steel, the conical bottom is 3/8" thick; next 5 feet is 5/16"; top of shell is 1/4".

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In turn, Nickel or Nickel-Clad Steel equipment in *your* plant, prevents the metallic corrosion which is a common cause of tainted or off-color soap, and contaminated glycerine.

Nickel-Clad Steel is a hot-rolled bi-metal: a layer of Nickel permanently bonded to a heavier layer of steel. The Nickel can be 10% to 20% the total thickness of the plate. The surface on the inside—the only surface that ever touches your soap—is Pure Nickel.

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Nickel-Clad Steel can be fabricated by all the regular methods, *including welding*. And without heat treatment, the welds offer the same corrosion resistance as the parent metal. Very large equipment can be fabricated right in your own plant.

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- Amalgamator shells
- Plodder hoppers
- Mixing tanks or kettles (steam jacketed)

IN THE MANUFACTURE OF LOTIONS
- Perfume storage tanks
- Fine oil storage tanks
- Lotion storage tanks

IN GLYCERINE EVAPORATION
- Evaporator body
- Evaporator downtakes
- Entrainment separators
- Recovered salt baskets
- Nutch filter tanks

IN CAUSTIC HANDLING
- Tank cars
- Causticizers
- Caustic storage tanks
- Evaporator bodies
- Evaporator downtakes

THE INTERNATIONAL NICKEL COMPANY, INC.

PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Textile Soaps

IN spite of the many recent developments, soap, the oldest of all washing agents, is still the one most used today. Although it has many applications in the home, great amounts are used for various purposes by the textile industry and for other industrial purposes. The soap manufacturer must study the needs of the textile industry to understand why and how soap products continue to maintain their strong position there. Various kinds of soaps, as well as chemically related products, find uses.

According to the usual definition, soap consists of an alkali salt, especially the sodium of potassium salt, of higher aliphatic carboxylic acids having at least 8 carbon atoms in the molecule. These include fatty acids containing saturated, as well as unsaturated and hydroxy groups. Ammonium salts of these fatty acids and the so-called acid soaps should be placed in the same general group. Heavy metal salts of the above fatty acids also find special application, as well as the alkali salts of cholic and desoxycholic acids, salts of naphthene carboxylic acids, cycloaliphatic carboxylic acids, the naphthene soaps, and salts of compounds obtained by splitting off water or by polymerization of fats and fatty acids, e.g., especially castor oil or its fatty acids. Salts of aromatic carboxylic acids, the resinates, are often constituents of ordinary soap.

Still another class is the combination of fatty acid with an organic base, forming soaps such as triethanolamine soaps. Salts of hydrocompounds of phenylnaphthylmethane-*o*-carboxylic acids, which, because of their solubility in water, viscosity, surface tension and emulsifying power, behave like ordinary soap, need only be mentioned for the sake of completeness, since they have not as yet attained practical significance in the textile industry. It will be seen that the compounds mentioned are salts of carboxylic acids with various bases.

Soaps possess above all good wetting, dispersing, foaming and cleansing power, properties which have established and kept them in their prominent place in textile processing. On the other hand, there are many recognized disadvantages,—the formation of calcium and magnesium soaps in hard water which not only causes loss of soap but produces spotting and streaking of fabric. Sometimes the formation of these insoluble soaps does not take place during the washing and regular treating processes, but later during rinsing, when it may not be realized that the danger still exists. It should also be remembered that insoluble soaps are formed with other metals such as iron, copper, chromium, zinc, manganese, etc., and that such soap precipitates will have a harmful effect on the fabrics. Other disadvantages of soap are its extraordinary sensitiveness to acids and the fact that it is salted out by concentrated alkali and by salt. All of these factors must be considered in introducing soap into the various phases of textile processing.

The affinity between fiber and soap is very marked, so that very thorough rinsing is necessary in order not to leave an undue amount of soap on the textiles. Since soap is not stable indefinitely, especially under these conditions, textile material carrying a small residue of soap may develop a rancid odor on long storage, and like soap itself, become spotted.

The greatest progress in overcoming these difficulties in connection with soap has probably been made by the introduction of new methods of water-softening, and the more general use of water-softening agents —soda, phosphates, etc. This has smoothed the way for the continued use of soap. J. Hetzer, *Seifensieder-Ztg.* **63**, 415-7 (1936).

◆

Detergents and wetting agents which are mixtures of unknown composition are customarily subjected to practical tests, but it may be necessary to supplement these by chemical analysis. To investigate materials containing Gardinols, Igepons and substances of a similar nature, first determine moisture by drying 10 gram samples for 4 hours at 100° C. The loss of any volatile ingredients

at this stage may require special investigation.

Dissolve the dried product in absolute alcohol and filter off insoluble material. This may include proteins, starches or gums, and inorganic salts. The latter can be examined for chlorides, sulfates and phosphates by the usual methods. Evaporate the filtrate to dryness and take up the residue in distilled water. Add excess barium chloride to precipitate sulfonates. Boil and let stand for some time before filtering, to insure complete precipitation, testing the filtrate with barium chloride. Wash, dry and weigh the separated precipitate.

Reflux another 5 or 10 gram portion of original sample with 125 cc. of concentrated hydrochloride acid for 2 to 3 hours. This hydrolyzes the sulfuric ester group. The liberated fatty alcohol can be separated by ether extraction or by wet filtration, the latter being preferable when persistent emulsions form with ether. With the Igepons there is hydrolysis at the ester grouping and liberation of free oleic acid. Later the reaction is reversed and the sulfonic acid complex salted out. The result should check that from barium chloride precipitation.

Stability to hard water can be tested by adding the agent to hard water at some practical concentration and then adding standard soap until there is a definite milkiness. Another procedure is to precipitate the hardness with soap and add a known solution of the agent until the precipitate is redispersed. F. C. Brown. *Textile Colorist* **58,** 98 (1936).

Nickel in Oil

Determination of nickel in hydrogenated oils by agitating with hydrochloric acid and treating the residue from evaporation with dimethylglyoxime and ammonia gives false results, owing to the presence of iron derived from the hydrogenating equipment. This iron, together with that naturally present in the oils, is in the ferrous state and gives a rose color with dimethylglyoxime. Jose Ranedo. *Anales soc. espan. fis quim.* **33,** 813-4.

Hydrogenated Oils in Soap

The surface tension, turbidity point, solubility and harness of soaps prepared with hardened oils from fish, soybean, chrysalide, rice, and soy have been determined at 20-80° C. and compared with those of the tallow sodium soaps. The range of soap concentration used was from 0.125 to 1 per cent. Oils from soybean, rice, soy and chrysalide having iodine numbers of about 70 give toilet and laundry soaps with properties very similar to those of tallow soap, and are good substitutes for tallow. The turbidity point is lower than that of the latter. Hardened fish oils with iodine numbers of 60-5, if mixed in a suitable amount with other fats and oils can also be used without producing any disagreeable effect. Yasota Kawakami. *J. Electrochem. Assoc. Japan* **3,** 389-94.

Soap Solubilities

Results of a study of the solubility of various soaps and the sedimentation of soap solutions at various temperatures show that stearic and palmitic soap solutions form insoluble precipitates at 0.25 per cent concentration at lower temperatures than the 0.5 per cent solutions. Oleic, isooleic, rosin, naphthenic and castor-oil soaps decrease the temperature at which the solutions of stearic and palmitic soaps form insoluble precipitates. B. Tyutyunnikov and A. Chernichkina. *Masloboino Zhirovoe Delo* **11,** 545-7.

Elaidinized Fatty Acids

The soaps of several fatty acids and of oils were compared with the soaps of the elaidinized isomers of the same. The criteria of cleansing action used were: (1) Surface tension of the soap solutions against air, per du Nouy; (2) the suds formation and suds stability, per Stiepel; (3) the wetting power, per Herbig; and (4) the emulsifying power, by determining the drop number of the soap solutions in several organic liquids. The data obtained led to the conclusion that soaps of elaidinized fatty acids show in many respects a better cleansing action than the soaps of nonelaidinized fatty acids. To substantiate this conclusion, a washing test with the potassium soap of palm-oil fatty acids was made on cloth soiled with tar. The soap of the elaidinized product was the more efficient. S. H. Bertram and E. C. S. Kipperman. *Ole, Fette, Wachse* **1936,** No. 6, 1-4.

Surface Tension of Soap

The ability of soap to decrease the surface tension of water is held to be a measure of the detergent effect of the soap solution. Determinations of surface tension with Traube's stalagmometer for a concentration of 0.1 gram per 100 cc. of sodium soap are as follows:

Soap	Surface Tension Dynes/cm.
Butyrate	64.66
Caproate	61.15
Caprylate	60.03
Caprate	49.3
Laurate	43.27
Myristate	26.61
Palmitate	57.55
Stearate	61.35
Oleate	35.01
Linoleate	39.45
Ricinoleate	48.73

If surface tension measurements can be taken as a criterion of general wetting power, it will be noticed that optimum wetting power is shown by myristate in the saturated series, and by oleate in the unsaturated series. (Ed. Note.—One might picture fabric as surrounded by a layer of dead air, which soap aids water to penetrate). N. N. Godbole and Sadgopal, *Indian Soap J.* **2,** 198-201 (1936).

High-Molecular Amines

High-molecular amines containing more than 10 carbon atoms are prepared by the catalytic hydrogenation in the liquid phase of the corresponding nitriles, such as lauric, myristic, palmitic, stearic and oleic nitriles resulting from the oxidation of paraffin wax, and mixtures of nitriles of the fatty acids of coconut oil, preferably in the presence of ammonia, above 50° C. and under 25 atmosphere's pressure. The products are used as assistants in the textile industry. I. G. Farbenindustrie A-G. British Patent No. 438,793.

Products and Processes

Petroleum Soap

Diluted alkali sludge is mixed with kerosene and gas-oil alkali sludge in a proportion of three to one, and 15-20 per cent of kerosene added. The mixture is heated with closed steam to 100-105° C. with agitation by means of air. After 4 hours of settling two layers are formed, the upper containing mineral oil and kerosene and the lower containing the soaps and kerosene. The soap layer is freed from kerosene by the usual distillation; the kerosene can be used again. A petroleum soap is thus obtained. K. Bagirov. *Neft* **2**, No. 15, 19-20.

Synthetic Fatty Acids

Synthetic fatty acids were obtained by the oxidation of paraffin. Besides the principal oxidation product, a so-called distillate and water-soluble acids were obtained. After saponification of the oxidized paraffin with caustic soda, it was subjected to hot extraction with benzene. Different soaps were prepared and investigated. Tests on the oxidation of different paraffin intermediates were also carried out and similar but darker products of a lower grade obtained. A. B. Davankov. Trans. VI *Mendeleev Congr. Thoret. Applied Chem.* 1932-2, Pt. 1, 867-76 (1935).

Bottle Wash Compounds

The caustic soda content of a washing compound to be used in soaker-type bottle washers must be high if the bottles are to be clean and sterile. A combination of 90 per cent caustic soda and 10 per cent anhydrous trisodium phosphate was found to be the most satisfactory for the following reasons: The caustic soda content is high, the appearance of the washed bottles is good, the consumption of washing compound is low, the lubricating value of the detergent on the bottle-washing equipment is satisfactory, the bactericidal effectiveness is high, the tendency for the deposition of scale on the equipment is low, and the phosphate-caustic combination can be produced in flake form in a condition allowing safer handling than caustic alone. Other combinations which were compared were mixtures of caustic soda with trisodium phosphate and soda ash, with sodium silicate, soda ash and trisodium phosphate, and with sodium silicate, trisodium phosphate and starch. Various proportions of the various alkalies were used in the mixtures. J. L. Hileman. 9th Ann. Rept. N. Y. State Assoc. Dairy Milk Inspectors 1935, 71-8.

Paste Soaps

Paste soaps are diluted sodium soaps whose color may be white or yellow, depending on the color of the fat mixture used. If it is desired to have a yellow soap, some crude palm oil may be mixed in or a suitable yellow dye may be used. Fat materials are tallow, tallow-like fats, hardened fats, bleached palm oil, etc. A suggested composition is 50 parts of tallow, 50 parts of hardened fat, 100 parts of caustic soda, 25° Be. The caustic solution should be diluted with about 500 parts of water to give a solution of 10-12° Be. The hot saponified mass is crutched with 100 parts of a ½-1 per cent solution of agar-agar until homogeneous. A cooled sample should possess a pasty, jelly-like consistency. It is run into barrels when deemed to be properly mixed. *Seifensieder-Ztg.* **63**, 357 (1936).

Rayon Softening Agent

A new imidazole derivative is prepared by treating benzimidazole with an ester of cetyl alcohol (177,815). Another derivative is obtained by treating μ-methylbenzimidazole with an ester of cetyl alcohol (177,816). Another is obtained by treating benzimidazole with an ester of lauryl alcohol (177,817), and a fourth by treating μ-methylbenzimidazole with an ester of cetyl alcohol and sulfonating the product (177,818). The first three derivatives are used as softening agents for viscose rayon and the last as a foam-forming and washing agent. Soc. pour l'ind. chim. a Bale. Swiss Patent Nos. 177,815-18.

Transparent Soap

A low-moisture content transparent soap may be made without addition of glycerine, alcohol, sugar or electrolytes. Purified fats are saponified with purified alkali in the presence of an amount of saponifiable natural rosin such that crystallization is prevented. The soap, still in the liquid condition is quickly cooled in thin layers to room temperature, dried in air, kneaded and formed into bars. The formula is as follows:

61 parts by weight of tallow
18 parts by weight of coconut oil
11 parts by weight of castor oil
10 parts by weight of rosin
45.8 parts by weight of caustic soda, 39° Be.

The fats are saponified in the usual way and the transparent hot soap paste cooled on cylinders from about 90 to 20° C. in 2-3 seconds. The soap is mixed with perfume, kneaded and shaped. The fatty acid content amounts to about 73-75 per cent. *Allgemeine Oel-und Fett-Ztg.* **33**, 155 (1936).

Cleansers for Food Plants

Powdered cleansing agents suitable for use in breweries, milk plants, cheese factories, etc. consist of soluble, strongly alkaline materials possessing germ-killing properties. Often a special antiseptic agent is added to intensify this effect. In use, conditions of concentration and temperature should be considered.—for example, the maximum for soda ash should be about 5 per cent, as used, for caustic soda 1 per cent and for trisodium phosphate 4-5 per cent. Too high temperatures should be avoided, 50° C. (122° F.) being recommended. A suggested composition for the powder is about 40 per cent calcined soda, 35 per cent

trisodium phosphate, 10 per cent sodium silicate, 5 per cent caustic soda, 7 per cent sodium sulfite and 3 per cent chloramine. *Seifensieder-Ztg.* **63,** 377 (1936).

Sulfonated Wetting Agent

Wetting agents for alkaline baths are made by adding a neutral organic solvent which is soluble in all proportions in water, having at least 1 hydroxy group, such as glycol or glycerol and their ethers still containing at least 1 hydroxy group, to a mixture of a sulfonated fatty compound stable to alkalies, for example a sulforicinate, with a terpenic alcohol. A froth-preventing agent such as amyl, octyl or nonyl alcohol or petroleum, or a mixture thereof may be added. Soc. pour l' ind. chim. a Bale. French Patent No. 45,649.

Lecithin Antioxidants

Commercial lecithins contain only small amounts of true lecithin. The antioxygenic agent in these preparations is cephalin. Purified lecithin is not an oxidation inhibitor but purified cephalin is. There is no quantitative relation between the amount of cephalin used and the prolongation of the induction period. The particular portion of the cephalin molecule responsible for its antioxygenic action is probably the monobasic phosphoric acid radical. H. S. Alcott and H. A. Mattill. *Oil and Soap* **13,** 98-100 (1936).

Boiler Compounds

Sodium hexametaphosphate has a definite solvent action on such compounds as are found in boiler incrustations. A typical reaction may be written

$$Na_6P_6O_{18} + CaSO_4 = CaNa_4P_6O_{18} + Na_2SO_4$$

which means that theoretically 100 grams of sodium hexametaphosphate will dissolve 22.2 grams of calcium sulfate. A number of solubility tests with various compounds were made, to show the actual quantitative relationships. In the following table, the figures represent the number of grams of each substance held in solution by 100 grams of sodium hexametaphosphate, compared with the amount which would be theoretically dissolved by the absolutely pure salt.

Compound	*Theoretical*	*Found*
Barium sulfate	38.13	37.6
Barium carbonate	32.24	31.8
Strontium sulfate	30.01	29.6
Calcium sulfate	22.24	22.1
Calcium carbonate	16.35	16.2
Magnesium carbonate	13.77	13.5
Iron carbonate	18.92	18.4
Zinc carbonate	20.48	10.1
Lead carbonate	43.65	13.9

In some cases the dry salt can be dissolved in hexametaphosphate solution and in some cases not. For example, barium chloride and sodium sulfate solutions were added separately and in the order stated, to a solution of sodium hexametaphosphate and no precipitate formed in 3 hours. However, if the barium chloride and sodium sulfate are first mixed, the precipitated barium sulfate does not dissolve on addition of sodium hexametaphosphate. In the above list calcium sulfate, calcium carbonate and magnesium carbonate were the only ones tested by the direct action of a solution of sodium hexametaphosphate on the dry compound in powdered form. R. T. Thomson. *Analyst* **61,** 320-3 (1936).

Sulfonated Detergents

Sulfuric esters of alcohols containing more than 8 carbon atoms, suitable for use as wetting and cleansing agents, are obtained by treating the alcohols with a sulfonating agent. During or after the sulfonation process, polyhydric lower molecular-weight alcohols or their sulfuric esters are added to remove the excess of sulfonating agent. For example, lauryl alcohol is treated with oleum, and glycerol-sulfuric ester added. These products are useful in the textile and leather industries. Chemische Fabrik vorm. Sandoz. Swiss Patent No. 177,938.

Dispersing Agent

A dispersing agent consists of the reaction product of aliphatic hydroxyamines containing one or more hydroxy groups, and sulfonated aliphatic alcohols containing more than 8 carbon atoms. An example is the triethanolamine salt of the sulfuric ester of oleyl alcohol. Such an agent will disperse oleic acid in water to form spinning grease. Böhme Fettchemie-G.m.b.H. German Patent No. 622,640.

Textile Soaps

Textile soaps must be noninjurious to the fiber of good solubility and free from adulteration. The components should be wholly saponifiable and must not communicate an offensive odor to the goods. F. C. Pratt. *Textile Recorder* **53,** 40, 43, March (1936).

Washing Powder

A washing powder is obtained by gelatinizing naphelite (Ed. Note—a complex silicate mineral) by treatment with concentrated sodium bisulfite solution, and adding 20-30 per cent of calcined soda ash. N. S. Kovarskii, S. B. Gutin and I. V. Gutin. Russian Patent No. 39,058.

Fat Synthesis

Earlier observations on the synthesis of fat by means of plant lipase have been confirmed. In the artificial synthesis of fat with plant lipase the characteristics of the product may be influenced by temperature cotrol. The stages of glyceride formation from glycerol and fatty acids are: first *a*-mono, second a *a'* di- and finally tri-glyceride. A fat approximating cocoa butter and acids approximating coconut fatty acids were prepared synthetically. S. L. Ivanov and P. T. Klokov. Trans. VI *Mendeleev Congr. Theoret. Applied Chem.* 1932-2, Pt. 1, 838-43 (1935).

Glycerine Distillation

Glycerine is distilled by heating to above 180° C. and conducting an inert gas through it, heated to the same temperature. The mixture of vapor and gas is cooled to a temperature exceeding 100° C. to condense the glycerine, and the gas is reheated and recirculated through a new portion of glycerine. S. N. Libinson and U. I. Kirzner. Russian Patent No. 40,346.

Rancidity Prevention

Materials known to have an antioxidizing effect are added to fats to prolong the induction period. Substances such as hydroquinone, α- and β-naphthol and guaiacol are typical of these materials. Tannins also hinder rancidity development. Hydroxydiphenyls or dinaphthyls whose aryl groups are directly connected, have a protective action in amounts of 0.001 to 0.1 per cent, as well as similar compounds whose aryl groups are separated by a methyl, amino or oxygen radical. Transition products of phenol, formaldehyde and amines are also used to prevent deterioration with age. Of special interest is the addition of unsaturated poly-basic aliphatic acids such as maleic, fumaric, aconitic, citraconic and itaconic acids, as well as their salts and esters. Of the amino derivatives used for stabilization, the aromatic amines or aminophenols such as *p*-aminophenol, are effective in amounts of 0.01-0.5 per cent. *Allgemeine Oel- und Fett-Ztg.* **33,** 167 (1936).

Bleaching by Hydrogenation

By using 0.3-0.4 per cent of gas producer residue during the process of hydrogenation of cottonseed oil at 200° C., bleaching is also effected, giving a fat mixture with 0.3-0.4 per cent acidity. G. Klein, M. Sergeev and E. Verner. *Maslo-boino Zhirovoe Delo* **11,** 542-4.

Bleaching Power of Earths

Adsorptive earths suitable for bleaching fats may be activated by treatment with acid or by electrodialysis. The physical-chemical changes are the same in both methods,—calcium, magnesium, potassium and sodium ions are replaced by hydrogen and aluminum ions. The bleaching power of the activated earth may be measured by colorimetric methods. The result is expressed as the amount of bleaching agent, expressed as per cent of the material being purified, which is necessary in order to bleach an oil to a definite degree of brightness. Very exact color determinations can be made on the oil by use of the Pulfrich photometer. The removal of color from the oil is purely an adsorption process, since it has recently been shown that Freundlich's adsorption curve applies. Adolf Voigt. *Fettchemische Umschau* **43,** 49-52 (1936).

Fat Refining

Fats are refined by treatment with steam or inert gas at temperatures above the melting point of the fat, until saponification is complete and the odor is removed. Superheated steam may be used. Sodium hydroxide may also be added. The process may be carried out *in vacuo*. Deutsche Hydrierwerke A.-G. German Patent No. 622,697.

Oxidation of Fats

Experiments on the oxidation of purified methyl oleate support the view that its induction period, and probably that also of natural oils, is due to the presence of inhibitors, and that purified unsaturated compounds have no induction period other than the time required for gaseous oxygen to diffuse into the liquid. Experiments with antioxidants indicate that phenolic inhibitors and inhibitols cause no change subsequent to the end of the induction period, that they exert their effect solely by inhibiting the formation of the initial active moloxide, and that they are entirely destroyed before the start of rapid oxidation which characterizes the end of the induction period. Perbenzoic acid and presumably other peracids, and copper oleate decrease the induction period by virtue of their destruction of natural inhibitors. L. A. Hamilton and H. S. Olcott. *Oil & Soap* **13,** 127-9 (1936).

Textile Washing Agent

A quaternary salt is prepared by treating α-bromolauric acid anilide with trimethylamine. The aqueous solution of the salt has high wetting qualities and is used in washing and dyeing textiles. Soc. pour l'ind. chim. a Bale. Swiss Patent No. 179,574.

New Saponifying Process

In an original method of soap manufacture, the saponifying agent is not caustic alkali but a mixture of the oxide of an alkaline earth and a salt of sodium or potassium. For example, a mixture of 100 parts by weight of trisodium phosphate and 104 parts by weight of lime is added to a boiling mixture of 500 parts of tallow and 1,500 parts of water. Saponification proceeds quickly. After its completion the soap is salted out with a 30° Be. solution of ordinary salt. Calcium phosphate is formed and passes into the lower layer as a precipitate, carrying impurities down with it. The calcium phosphate can be reclaimed and used again. The method has advantages for the small manufacturer. *Seifensieder-Ztg.* **63,** 354 (1936).

Bleaching Fatty Acids

Fatty acids are more difficult to bleach than neutral fat. The simplest method is to bleach with 2-3 per cent of 30 per cent hydrogen peroxide at a temperature slightly above the melting point of the fatty acid. The agent is stirred with the fatty acid at this temperature for a half hour, then kept overnight at the same temperature. It is then stirred again at 50 or 60° C. for some time. The container should be an enameled, stoneware or wooden vat. While the above method can be recommended, there is no guarantee that it will give the desired results. *Seifensieder-Ztg.* **63,** 377 (1936).

Refining Oils

Vegetable oils are refined in the presence of excess alkali, together with a solution of electrolyte such as sodium chloride, by heating with live steam for 1-2 hours. A. A. Zinov'ev and O. B. Khalatova. Russian Patent No. 38,721.

Fat Splitting Patent

Fatty acids produced by splitting fats with Kontakt are washed with salt solution and treated with steam and then with air at 80° C. M. M. Nikiforov. Russian Patent No. 40,485.

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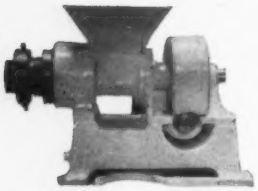

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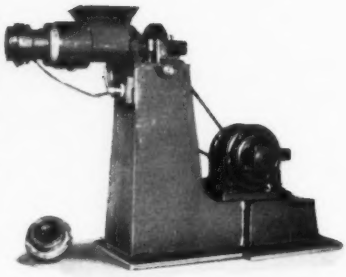

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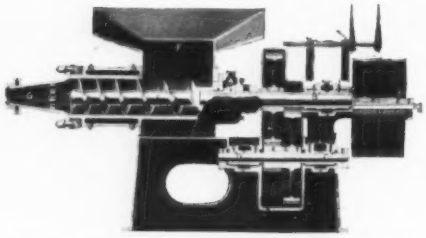

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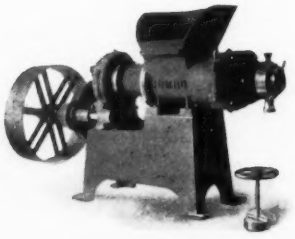

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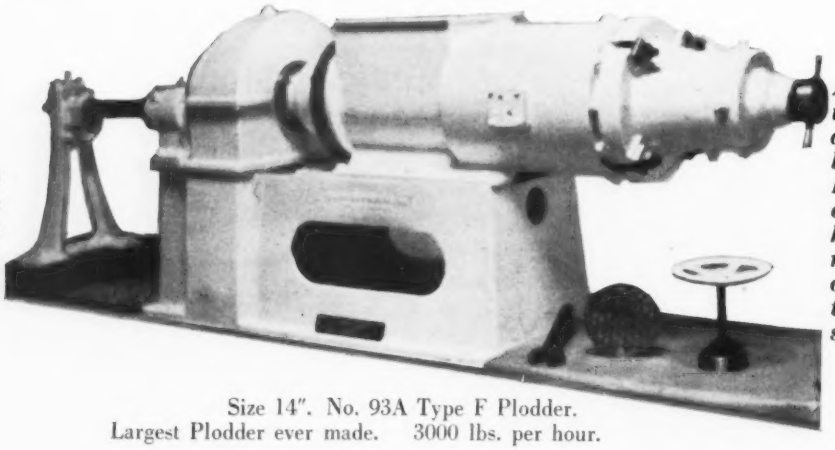

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Sodium Naphthenate Uses

Sodium naphthenate is a grease-like solid substance, combining excellent emulsifying powers and foam-producing properties. Like all sodium salts, it is soluble in water, but it hydrolyzes to only a very small extent. In conjunction with trisodium phosphate and triethanolamine, it forms an excellent carpet soap. A well known proprietary brand contains 30 per cent of sodium naphthenate, 65 per cent of trisodium phosphate, and 5 per cent of triethanolamine.

The gelation capacity of sodium naphthenate is extremely high. Even at 0° C. concentrated solutions remain jellified. This property is used to advantage in the manufacture of neutral soft soaps which do not precipitate crystals. An excellent dry-cleaning soap is made from equal parts of carbon tetrachloride, cyclohexanol and sodium naphthenate.

The naphthenate has high disinfecting properties. This is an advantage in making liquid soaps for tip-up dispensers. A typical formula is: 16 per cent coconut oil soap, 4½ per cent caustic potash, 14 per cent pine oil, 5 per cent sodium naphthenate and the balance water.

The gelation capacity is also utilized in the preparation of waterless soaps, which may be used to clean the hands without water. Such a jelly consists of sodium naphthenate, agar agar, glycerine, soft soap and ammonia, made up into an aqueous solution containing 20 per cent total solids. H. Courtney Bryson. *Chem. Trade J.* **98,** 445-6 (1936).

Glycerine Reactions

Although glycerine is put to many uses, not much is known about its chemical behavior, especially its action with oxidizing agents. With potassium permanganate in acid solution, carbon dioxide and water are formed. In neutral solution glyceric aldehyde and finally dihydroxyacetone are formed. In faintly alkaline solution, the ketone and glyceric acid appear. With increasing alkalinity aldehydes and ketones disappear, but in addition to glyceric acid, tartronic acid and finally mesoxalic acid are formed. In strongly alkaline solution glycerine is converted quantitatively into oxalic acid, a reaction used in its quantitative determination. Glycerine behaves the same way in acid solution with oxidizing agents other than permanganate, for instance potassium or sodium bichromate or chromic acid. Welwart. *Seifensieder-Ztg.* **63,** 372 (1936).

Acidity of Oils

The acidity of oil varies with the time of storage when extracted with carbon disulfide from (1) hot pulp, (2) press cake as removed from the bags coming out of the press, (3) trimmings from the press cake. All of the samples studied were taken in the course of regular commercial operation in the production of peanut and castor oils under a pressure of 200 kilograms per square centimeter. In the course of two months the acidity can increase from 5- to 10-fold. When the quality of the raw material is known, the age of the press cake can be estimated to within 20 per cent. The oil removed by the press always has a lower acidity than that remaining in the press cake. Jean Rallis. *Bull. mat. grasses inst. colonial Marseille* **20,** 43-7 (1936).

Detergent Solubility

Detergent compositions contain a number of ingredients, each in the form of separate particles and grains. The several ingredients are so chosen as to have different rates of solubility. Electric Smelting and Aluminum Co. British Patent No. 440,952.

Castor Oil Solubility

One volume of castor oil is soluble in 100 volumes of petroleum ether. Larger additions of castor oil produce turbidity or formation of an oil layer, until the addition is such that the volumes of each are about equal. At this concentration the oil dissolves all of the petroleum ether, forming a homogeneous solution. Hot petroleum ether dissolves castor oil, thus it is technically possible to extract the oil with benzine. D. Holde. *Ole, Fette, Wachse* 1935, No. 1, 1.

Soap Adsorption from Oils

The wasteful procedure of washing neutralized oils free from soap is eliminated by the following method of adsorption of soap and coloring matter with the use of several native clays activated at 100° C. and powered to a mesh of 1600 apertures per square centimeter. Contrary to the general viewpoint, the specific adsorptive properties of the activated clays are greatly increased by wetting the oils to 1-2 per cent of moisture. Sunflower oil at 60-5° C. is stirred with 1-2 per cent of water introduced by means of an atomizer, to a homogeneous emulsion. This takes 20-30 minutes. After the introduction of 1 per cent of clay, the oil mixture is heated to 95-100° C. in a vacuum or 105-10° in an open vessel, and the stirring is continued until the water is evaporated. The oil is filtered from the adsorbent. By this method sunflower oil containing 0.167 per cent of soap was freed from all traces of soap or alkalinity detectable in the presence of water with phenolphthalein. M. Bauman and L. Bogdanov. *Maslo-boino Zhirovoe Delo* 11, 588-90.

Fat Consistency

An apparatus for measuring the consistency of fats is similar to a viscometer. The sample container is supplied with a piston and cover and is attached to an air-pressure source by means of which a constant pressure may be applied to the piston. The fat sample is extruded from the apparatus at a fixed standard of temperature and pressure for 15 minutes and then weighed. The weight of this amount of fat is designated as the gram value of the consistency and is reported with the temperature and pressure used in the test. Determinations on a number of fats show that there is no close relationship between the melting point of a fat and its consistency. Ewald Pyhala. *Ole, Fette, Wachse* 1935, No. 1, 13-14.

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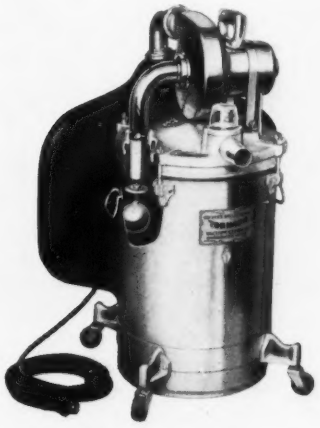
244—Vacuum Accessory

Breuer Electric Mfg. Co., Chicago, is introducing a new attachment for the "Tornado" heavy duty vacuum cleaner which makes possible removal of over 70 per cent of the water from rugs and upholstery after shampooing, preventing soaking of the rugs



and cutting down drying time. The water is deposited directly into the tank and does not come in contact with either the bag or motor and fan assembly. The cleaner, of course, can also be used for removing dry dust and dirt as well. A water float shut-off attachment is provided which automatically shuts off the suction when the water reaches a point at which there is danger of overflow.

245—Double Roll Crusher

Jeffrey Mfg. Co., Columbus, Ohio, has developed a new design of double roll crusher. A special feature is a self-contained endless belt drive between the rolls which allows quick adjustment of the rolls within the limits of the sizing range while the machine is operating. The crusher is provided with an all-steel frame.

246—Colloidal Mixer

Colloid Equipment Co., New York, has developed a new colloidal mixer for mixing pigment colors and clays, reducing viscosity of fluid mixtures and aiding the solution of solids. The mixer consists of fifteen notched discs which are rotated on a shaft within a cylinder. The angular setting of the discs, combined with the rotation of the shaft, produces the mixing action. The feeding hopper carries a four mesh screen to catch any oversize particles. The wide-open capacity of the unit is 250 gallons per hour for a medium viscosity solution. When set up for continuous production, a float-valve control maintains the proper level in the hopper.

247—Pressure Compensator

Foxboro Co., Foxboro, Mass., has developed an automatic pressure compensator for its flow meters to prevent errors in measuring the flows of compressible fluids which might be caused by variations in the static pressure of the flow. The device is simply a spiral pressure tube connected to a lever. As the line pressure changes, the spiral adjusts automatically to compensate for the pressure changes.

251—Unusual Lifters

Lewis-Shepard Co., Watertown, Mass., has prepared a new folder illustrating its line of unusual mechanical lifters for handling products which are ordinarily thought of as particularly hard to handle, and to which ordinary material handling devices are not so well adapted. Special devices are shown for lifting and moving drums, kettles, barrels, boxes, tanks, chemicals, oils, etc. Copies will be mailed on request.

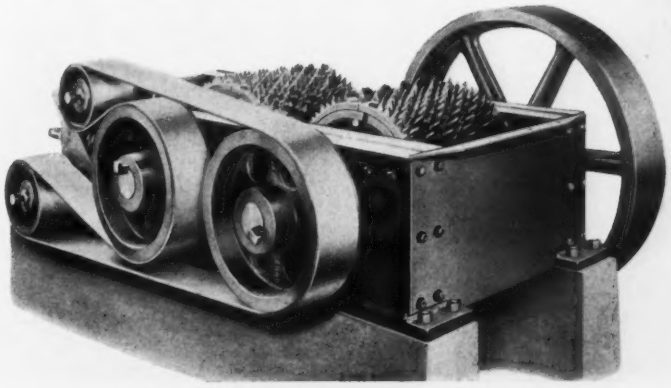
Publications

249—Pumice Booklet

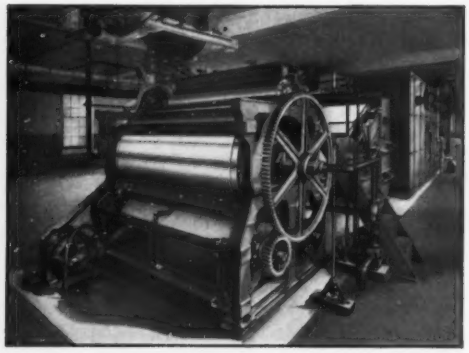
James H. Rhodes & Co., Chicago, has just issued a booklet captioned "Let's Talk About Pumice." Information is given as to the occurrence and characteristics of various natural pumice deposits, with advice as to the types that are suitable for use for various purposes. A series of photomicrographs shows the action of pumice on polished surfaces and indicates how pumice containing hard mineral crystals can scratch a surface on which it is used. Suggested specifications for purchase of pumice are given. Copies of the booklet are available.

250—Weighing Illustrated

Exact Weight Scale Co., Columbus, Ohio, has just issued an illustrated booklet entitled "Industry at work," showing how scales are used in the packaging of various products in different industries.



PRODUCING THE PERFECT CHIP FOR ALL SOAP MAKING NEEDS



● New Type Proctor Chip Soap System producing extremely thin chips of textile soap in new plant of Original Bradford Soap Co., River Point, R. I.

● The New Proctor Chip Soap System produces the thinnest of chips . . . chips perfectly formed in long ribbons, evenly thin from edge to edge, uniformly dried free from hard overdried particles or underdried spots. These chips make cleaner, whiter,. quicker-dissolving laundry flakes. They make smooth-surfaced, clear-colored toilet cakes. They give quicker, better milling and plodding. They give quicker, easier grinding into powdered soaps . . . with less loss in dust. New high speed chilling roll . . . spray-cooled, pump-drained, precision-ground, smooth-surfaced. New drying machine . . . with revolutionary improvements in principal details of design . . . more efficient, more economical, cleaner in operation. Write for your copy of our new descriptive Bulletin No. 72.

PROCTOR & SCHWARTZ, INC.

• SEVENTH ST. & TABOR ROAD PHILADELPHIA •

Breaking into the English market

The United Kingdom and the British Empire offer profitable fields for sales expansion. Many well-known American manufacturers are concentrating on this market. If you are interested why not become a subscriber to the "Soap, Perfumery and Cosmetics Trade Review"—the only British trade paper produced exclusively for manufacturers of soaps and cosmetics.

The "S. P. C." is more than a trade paper—it provides a thorough marketing service for its subscribers. It will give you help in finding the right manufacturer to produce your goods—it will put you in touch with selling agents and advertising agents. It will collect and forward information and render other useful services entirely without charge. A year's subscription costs you only $3.00 (or $5.00 for 2 years). Why not send in your subscription now for two years? Send us your check or international money order.

Soap Perfumery and Cosmetics

Incorporating The Soap Trade Review

102-5 Shoe Lane, London, E. C. 4

TRADE REVIEW

New Patents

Conducted by

Lancaster, Allwine & Rommel

Registered Attorneys

PATENT AND TRADE-MARK CAUSES

815 15th Sreet, N. W., Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,039,377, Hard Water Soluble Oil, Patented May 5, 1936, by Elmer Wade Adams, Hammond, Ind., and George W. Flint, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill. A soluble oil which contains no alcohol and which will readily emulsify in extremely hard water and which consists essentially of a mineral lubricating oil having a viscosity of about 80-300 seconds Saybolt at 100°F. containing in solution about 8% to 40% of purified mahogany soap, a small amount of a preferentially water-soluble soap, and about 2.5% to 0.5% of water, the amount of water being sufficiently low to prevent separation of the soap when the soluble oil is exposed for an extended period of an ice bath.

No. 2,039,989, Sulfonation of Oils, Patented May 5, 1936, by Alexander Gressner, Habana, Cuba. In the sulphonation of oils and greases containing oleaginous material, the step comprising sulphonating the oleaginous material in the presence of an acid sulphate of an alkali metal at a rate to limit the temperature rise to approximately 30° C.

No. 2,040,430, Stabilizing Soap, Patented May 12, 1936, by Ernest C. Crocker, Belmont, and Lloyd F. Henderson, Reading, Mass., assignors to Arthur D. Little, Incorporated, Cambridge, Mass. The art of stabilizing soap containing an ionized metal which acts catalytically to promote oxidation of ingredients of the soap, which comprises adding to the soap mass zinc sulfide.

No. 2,040,673, Emulsifying Soaps, Patented May 12, 1936, by Jack Robinson, Wood River, Ill., assignor to Standard Oil Company, Chicago, Ill. The method of making a soluble oil from mahogany soap, which comprises washing impure mahogany soap with a 3% to 10% aqueous solution of sodium hydroxide, removing the aqueous washing solution and impurities from the slightly alkaline mahogany soap, neutralizing the alkalinity of the washed mahogany soap with a soap-forming acid, and admixing the neutral soap with a light mineral oil.

No. 2,041,744, Cleaning Composition, Patented May 26, 1936, by Arthur B. Cummins, Plainfield, N. J., assignor to Johns-Manville Corporation, New York, N. Y. A pulverulent composition of matter adapted for use as a cleanser, weighing not substantially more than 20 pounds to the cubic foot and comprising calcined diatomaceous earth particles retaining their diatomic structure not more than 2% of which are retained on a 30-mesh screen, and more than 5% of which are retained on a 325-mesh screen in a wet screening test, a powdered water-soluble soap and a detergent selected from the group consisting of sodium carbonate, sodium borate, sodium silicate and trisodium phosphate, the proportions by weight of the several ingredients of the composition being of the order of the following: 65 to 90 parts of the diatomaceous earth, 2 to 10 parts of the soap, and 5 to 30 parts of the detergent.

No. 2,042,104, Rubber Coated Soap, Patented May 26, 1936, by John P. Kane, New York, N. Y. The process of manufacturing a rubber coated cake of soap, which comprises coating a cake of soap with an aqueous rubber solution containing a vulcanizing agent and an ultra-rapid accelerator, and drying and vulcanizing the coated cake of soap at relatively low temperatures whereby a non-sticking, readily stripable coating impermeable to water and permeable to scents is obtained.

Effects on Hydrogenation

Preliminary experiments with linseed, mustard, rapeseed, soybean, dolphin, seal and shark oils show that the presence of nitrogenous substances and phospholipides (up to 0.06 per cent P_2O_5) does not affect the process of hydrogenation, while peroxides retard the hydrogenation of oils. Phosphorus-containing substances render the neutralization of oils difficult and cause excessive losses because of their emulsifying action. Ordinary methods of refining reduce the phospholipide content of oils. E. Botkovskaya and L. Nikolaeva. *Masloboino Zhirovoe Delo* **11**, 579-81.

Viscosity of Rosin Soaps

The viscosity of aqueous rosin soaps increases greatly with increasing concentration of rosin. Rosin is not peptised by borax unless a hydroxy-fatty acid is also present. Although glycerol raises the viscosity of fatty acid soap solutions, it lowers that of rosin soap solutions. J. Scheiber and R. Sandig. *Kolloid-Z.* **74**, 343-53 (1936).

Semi-crystalline Soaps

A study of the molecular structure of soaps and detergents such as the sodium salts of stearic acid, hydroxystearic acid, sulfonated hydroxystearic acid and sulfonated octadecyl alcohol, was made. The spacings of the lattice planes of stearic acid and its derivatives were found to be about 16 A. for all compounds. Chemical changes of the molecule at the secondary position, e.g., the introdution of a secondary hydroxyl group, and its sulfonation, did not have any effect on the x-ray picture. In contrast to other investigators only the simple molecular length was found. The x-ray method was also found to be applicable to aqueous soap solutions of the hydrogels and to systems having a definite soluble character. Willy Seck. *Angew Chem.* **49**, 203-6 (1936).

Oil from Filter Cake

Oil is separated from Fuller's earth, clay or similar material by mixing the oil-impregnated material with a brine solution and heating to about the boiling point of the brine solution. The salt present should be 4-6 per cent of the mixture. The mixture is allowed to settle, when the oil floats to the top and the brine solution can be drawn off from below. Edward R. Mitchell and Russel Kendall. Canadian Patent No. 357,509.

DEO-BASE

Reg. U. S. Pat. Off.

No "Kerosene Breath"—

No insecticide spray can be popular if it has "kerosene breath."

DEO-BASE, the modern insecticide base, enables you to meet the consumer demand for complete freedom from kerosene odor. That's only one reason for the superiority of DEO-BASE. There are five more.

You want re-orders, as well as orders. DEO-BASE will help you get both. DEO-BASE enables you to use small quantities of delicate perfumes in your insecticides. A finished spray made with DEO-BASE can be sold everywhere for use anywhere.

No wonder that the Insecticide Industry calls DEO-BASE

"The Ideal Insecticide Base"

L. SONNEBORN SONS, INC.

REFINERS OF WHITE MINERAL OIL AND PETROLATUM

Refineries: Petrolia and Franklin, Pa.

NEW YORK
88 Lexington Ave.

LOS ANGELES
215 West 5th St.

CHICAGO
400 W. Madison St.

STOCKS CARRIED IN PRINCIPAL CITIES

SANITARY PRODUCTS

A Section of "SOAP" Dealing with

INSECTICIDES • DISINFECTANTS • EXTERMINATING
FLOOR PRODUCTS • SANITARY SUPPLIES • MOTH PRODUCTS

DEATHS mean DOLLARS

POWCO BRAND
REG U.S. PAT. OFF.

Deaths—Killing Power—Maximum Killing Power that actually results in maximum deaths of insects in the laboratory and in practical use! That is what you must have when you buy and pay for Pyrethrum Extract if your product is to do the job of the modern insecticide.

With Powco Brand Basic Pyrethrum Extract you are free from extract worries and trouble because it is the only natural highly concentrated extract.

Be sure of maximum and uniform toxicity—be confident of the success of your product—watch your sales increase, and know that you get what you want:

"Killing Power — that's the thing"

Activated "A" Dust, low cost Pyrethrum for exterminators and roach powder manufacturers.

JOHN POWELL & CO., INC.

114 EAST 32nd ST. *Specialists in Pyrethrum and Rotenone Products* NEW YORK

1937 STOCK SPRAYS

♡♡♡

THIS season has seen consumers and dealers turning definitely away from inefficient and unsatisfactory stock sprays even though many of these have been available at ridiculously low prices. The trend is definitely toward the newer type of sprays, with carefully selected base oils, plenty of toxicity and, most important of all, a degree of enduring repellency which insures the animals real protection. Nothing less will do.

Prentox Concentrates have played an important part in this development as they have permitted the manufacture of genuinely efficient sprays at an economical cost. July and August are ideal months for testing out these concentrates and determining by actual experience what they will do to bring your spray up to the 1937 standard. We will be glad to supply samples and suggestions.

♡♡♡♡

R. J. PRENTISS & CO., INC.

100 GOLD STREET NEW YORK, N. Y.

PYRETHRUM—DERRIS—CUBE

BREUER'S TORNADO QUALITY SPRAYERS SELL MORE INSECTICIDE

Breuer's Tornado Electric Sprayers may cost a little more but in the long run they are by far the lowest in price because they perform with greater efficiency and last for years. If the razor is no good you can't sell the blades. So it is with sprayers. Without Tornado Sprayers you can't get repeat orders or increased business.

Perfect atomization—years of trouble free service—Underwriters approval—safety, approved materials—all mean complete customer satisfaction.

In 1936—build better business—by supplying your customers with the best sprayers.

MOST COMPLETE LINE OF ELECTRIC SPRAYERS TO MEET EVERY SPRAYING PROBLEM

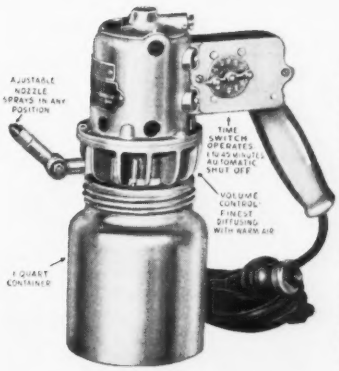
The New Tornado Model 36 Automatic Time Switch—Volume Air Control One Gallon Capacity, 1-3 H.P. G. E. Universal Motor

1/3 H.P. G.E. MOTOR
TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
COMPRESSOR TYPE
1 GALLON CONTAINER

Here is the finest sprayer ever built. Similar to the now widely used Tornado Model 54 and retaining the automatic time switch, volume air control and adjustable nozzle features, the new Model 36 will spray a big volume of insecticide great distances in finest gas formation.

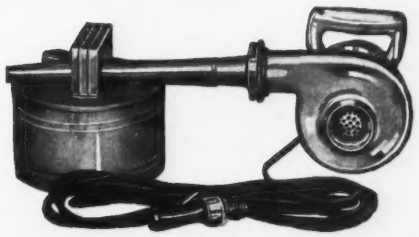
The patented principle of heating and compressing material does the trick. Just the sprayer you need for covering large distances and penetrating with the finest gas every possible source of insect existence.

Get the facts on this sprayer before buying!

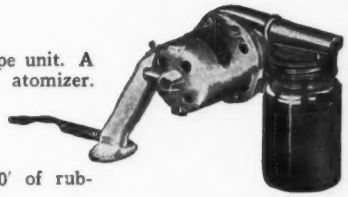

ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
1 QUART CONTAINER

MODEL 54—1 QT. CAPACITY

It features an automatic time switch set at any point from 1 to 45 minutes—sprays desired amount without any attention whatever — automatically shuts off. Can also be used for hand spraying. Adjustable nozzle can be set for spraying in any position. Also exclusive volume control adjustment permits spraying one ounce every two to four minutes with either fine or heavy spray. MODEL 53 same as Model 54 except does not have automatic time switch.



Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18′ to 20′. 1/3 H.P. G.E. Universal Motor. Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions. Write today for complete description and circulars.



Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8′ to 10′. 1/8 H.P. G.E. Universal Motor, 1 pint glass jar. 20′ of rubber covered cable.

BREUER ELECTRIC MFG. CO.

862 Blackhawk Street **Chicago, Ill.**

We do not sell insecticides. Our business is manufacturing sprayers.

Patented in U.S.A. and Foreign Countries

The Makers of
PYROCIDE 20 . . . offer

The FIRST and BEST Standardized Concentrated Extract of Pyrethrum

1. Guaranteed to contain 2.00 grams of pyrethrins per 100 cc., equivalent to 2.40% pyrethrins by weight, a *definite, dependable* guarantee.
2. Not subject to loss of pyrethrins when properly stored.
3. Saves money over direct percolation of pyrethrum flowers, since at this season, flowers average .75% pyrethrins by the copper reduction method. Each gallon of Pyrocide 20 is made from 20 pounds of flowers assaying .90% pyrethrins by the copper reduction method.
4. Best source of pyrethrins for cattle spray repellents and killers.
5. Standard the world over, by which all others are evaluated.
6. Immediate, convenient shipments from several warehouses.
7. Preferred by many of the largest buyers of concentrates, who have learned from many years of experience that they can depend upon Pyrocide 20 as fully as if it were made under their own supervision. All these buyers have the same opportunities to buy competing products. They have good reasons for preferring Pyrocide 20.
8. *Inexpensive*—Pyrocide 20 is now quoted at low prices, which make for high profits on finished insecticides.

Manufactured by

McLaughlin Gormley King Company, Minneapolis

UNIFORM KILLING POWER

you . . . DRY PYROCIDE

The FIRST and ONLY Concentrated, Stabilized Pyrethrum Dust for Making Dust Insecticides

1. Highly concentrated—*one* pound of Dry Pyrocide makes *ten* pounds of finished dust insecticide. Saves 9–10ths of the freight bill.
2. Pyrethrins are *outside, not inside*—pyrethrum and derris powders contain active principle locked up within cell walls, not available as insecticide.
3. *Stabilized*—keeps its strength fully, whereas pyrethrum powder loses strength in storage.
4. Non-poisonous—makes dusts which leave no poisonous residue.
5. Effective against wide range of insects,—kills both chewing and sucking varieties.
6. Retains killing power when diluted.
7. Experimented with for two years.
8. Easily mixed, no special equipment required.
9. *Inexpensive*—insecticide dusts made from Dry Pyrocide compare favorably as to cost with poisonous and non-poisonous dusts now on the market.

Dry Pyrocide *saves pyrethrins,* makes them do more work! You can use Dry Pyrocide profitably. Write for a trial shipment and prices. Packed in 200, 100, 30, and 15 lb. steel air-tight drums with crimped tops. Shipped only from Minneapolis.

Manufactured by

McLaughlin Gormley King Company, Minneapolis

PYROCIDE 20

STANDARDIZED EXTRACT OF PYRETHRUM FLOWERS

The good ones are in any living-

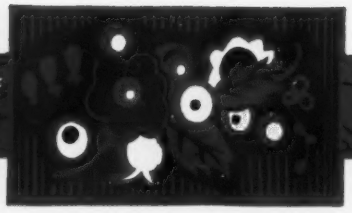
Gone are the days when a housewife dared not fly-spray her living-room. Today's sprays need not be ashamed in anyone's home—they can be made to smell agreeable.

What it takes

van Ameringen-Haebler, Inc. is widely known for the development of perfume materials for fly-sprays. There's no time ***now*** for "maybe's." Call on people who know how to help and are willing to do a real job for you. Only experts are good enough.

And now, THE OFFER:

Express, mail or bring to our New York office one gallon of your spray, ***unperfumed.*** Tell



van Ameringen-

Manufacturers and Importers of Aromatic Essentials

AROMATIC CHEMICALS—ESSENTIAL OILS—FLAVORS—PERFUME SPECIALTIES—

not ashamed room.

us how much per gallon you can afford, to make it smell better. (It doesn't pay to stint).

We'll send you back your spray ***neutralized or scented*** in a way that will positively help you sell goods this season. Unnecessary to repeat that time is short. Better do it at once.

OPPORTUNITY

This year promises to be a big fly-spray year.

How do we know?

First of all, fly-spray makers have been advertising and have succeeded in making the public spray-conscious.

Secondly, the sales curves of the past few years show *consumer acceptance increasing.* That means more people are willing to accept the suggestion that they use a fly-spray.

Finally, sprays are being "parlorized." No longer is it necessary to apologize for the odor. *The good ones are not ashamed in any living-room.*

Haebler, Inc.

315 FOURTH AVENUE, NEW YORK

Chicago *Toronto* *Los Angeles* **FACTORY, ELIZABETH, N. J.**

Lethane 384

Synthetic Insecticide Concentrate

AFIELD OR AT HOME

SPEED of killing and small percentage of recovery make insecticides which contain LETHANE 384 ideal for the control of flies.

To both manufacturer and user LETHANE 384 has further desirable qualities. An organic chemical wholly soluble in petroleum distillates, it makes sprays that are colorless, non-staining, sparklingly clear, stable, uniform, and easily perfumed.

Since LETHANE 384 is a synthetically manufactured product of American origin, its cost is not influenced by crop conditions and fluctuating foreign exchange.

RÖHM & HAAS COMPANY, INC.

***222 West Washington Square,* PHILADELPHIA, PA.**

Mid-West Representatives, Research Laboratories at Cedar Rapids, Iowa

SAVE YOURSELF DOUBLE
IN MONEY AND TROUBLE
WITH

PARATINTS

IF you make Paradi blocks, bath salts or moth balls, PARATINTS will slice your coloring and scenting troubles and cost in two. They do both jobs in the same time it takes you to do either separately—and at the same cost! Moreover, they do both better. They're already mixed in the right proportions to give you uniformly excellent results. Why not take advantage of their double-duty action? Samples are available in six popular colors—all matched with appropriate scents, that efficiently cover the odor of paradichlorobenzene.

Series A ..... $2.00 a pound
for use where cost is an important consideration

Series B ..... $4.50 a pound
for use where the highest perfume value is a necessity

GIVAUDAN

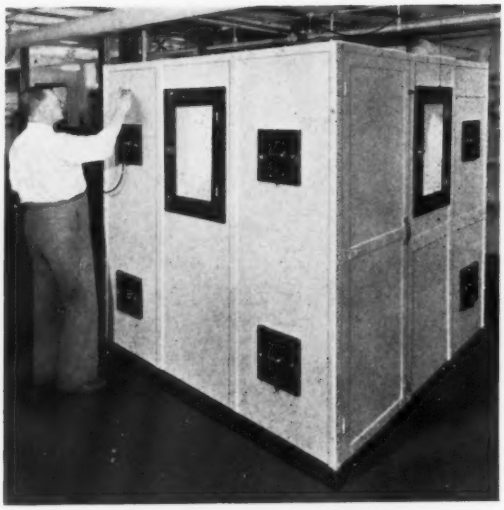
DELAWANNA INC.

80 FIFTH AVENUE, NEW YORK, N. Y.

Branches: Philadelphia Los Angeles Cincinnati Detroit Dallas Baltimore
New Orleans Chicago San Francisco Seattle Montreal Havana

"Di-Bug" products are thoroughly tested biologically in our own Peet-Grady testing laboratory. A chemical assay is also made of the pyrethrin content of the flowers as well as of the finished products.

Control of KILLING POWER by Systematic Check Testing



''DI-BUG'' PYRETHRUM EXTRACTS and POWDER

You cannot make a silk purse out of a sow's ear. To manufacture a satisfactory insecticide, your raw material, whether pyrethrum flowers, powder or extract, is of prime importance. Constant vigilance and most thorough checking of pyrethrins and kill, as conducted in our laboratories, have established in the trade the certain confidence that DI-BUG pyrethrum products result in finished insecticides with a higher kill. That means steady repeat business for you.

SPRAYSENE—SCIENTIFIC INSECTICIDE BASE

FREE FROM KEROSENE ODOR

Many so-called deodorized kerosenes do not deserve this name, others do not run uniform or do not correspond to the specifications of the National Association of Insecticide and Disinfectant Manufacturers for the hydrocarbon distillate base test. SPRAYSENE is free from kerosene odor, runs uniform, corresponds to the above specifications and remains stable. Its high flash point of 175° F. makes SPRAYSENE safer. Its low end point insures complete evaporation.

SHERWOOD PETROLEUM COMPANY, INC.

BUSH TERMINAL, BROOKLYN, N. Y.

Branches or Agents in Principal Cities

National Association of Insecticide and Disinfectant Manufacturers Incorporated 1914

National Association of Certified Exterminators & Fumigators — Certified Chemuness

DICHLOROMES NORDA

For Paradichlor Benzene

Series A $1.00	Series B $1.50	Series C $2.00
Bouquet A	Bouquet B	Bouquet C
Lilac A	Lilac B	Lilac C
Rose A	Rose B	Rose C
Violet A	Violet B	Violet C
Sweet Pea A	Sweet Pea B	Sweet Pea C
Gardenia A	Gardenia B	Gardenia C

SECTOROMES NORDA

For Fly Sprays

$.50 lb.	$1.00 lb.
Sectorome No. 1	Sectorome No. 11
Sectorome No. 2	Sectorome No. 22
Sectorome No. 3	Sectorome No. 33
Sectorome No. 4	Sectorome No. 44
Sectorome No. 5	Sectorome No. 55
Sectorome No. 6	Sectorome No. 66

Norda

ESSENTIAL OIL & CHEMICAL CO., INC.

Chicago Office
325 W. Huron St.

Los Angeles Office
685 Antonia Ave.

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Canadian Office
119 Adelaide St., W., Toronto

601 West 26th Street, New York City
LAckawanna 4-4700

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Candler Annex Bldg., Atlanta, Ga.

SUPER 20 ★ **THE PERFECTED** ★ **PYRETHRUM CONCENTRATE** **SUPER 30**

Pyrefume is packed with killing power—quick, sure and uniform. Universal scientific opinion agrees on the accuracy of the Tattersfield method (Seil modification) followed by our laboratories in the evaluation of Pyrethrins in Pyrethrum Flowers.

We are not satisfied with "calculating" the Pyrethrins content of the extract from the assay of the flowers as may be the case when a copper reduction method of assay is used. We assay the extract itself after manufacture by the Seil method mentioned which enables us to guarantee a Pyrethrins content of 2 grs. per 100 cc. in PYREFUME SUPER 20 and 3 grs. per 100 cc. in PYREFUME SUPER 30. To confirm the killing power physiologically we test the toxicity of Pyrefume in our own Peet-Grady chambers.

As the largest botanical drug firm in the world, our vast physical resources and modern laboratories enable us to keep abreast of latest developments in all phases of the industry. Penick products are universally accepted as products of unquestioned quality.

Call on us for technical data on all types of insecticides.

S. B. PENICK & COMPANY

132 NASSAU STREET, NEW YORK

1228 WEST KINZIE STREET, CHICAGO

REPRESENTATIVES ALL OVER THE WORLD

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

Perfumes For

THEATRE SPRAYS

It makes no difference whether you use Alcohol, Alcohol and Water or Water alone as a base—we can furnish the proper perfume oil to produce an absolutely clear spray, without filtering. Furthermore, our perfumes will prove extremely popular with your customers.

Three Types

Standard Spray Odors for Alcohol Base Sprays	Special Spray Odors for Alcohol and Water Sprays	Super Soluble Bases for Water Base Sprays
$3.00 lb. in 1 lb. lots	$2.60 lb. in 1 lb. lots	$1.75 lb. in 1 lb. lots
2.90 lb. in 5 or 10 lb. lots	2.55 lb. in 5 or 10 lb. lots	1.70 lb. in 5 lb. lots
2.80 lb. in 25 lb. lots	2.50 lb. in 25 lb. lots	1.60 lb. in 25 lb. lots
Use 1 oz. to 1 gallon.	Use 1 oz. to 1 gallon.	Use 2 oz. to 1 gallon.

Obtainable in 20 different odors:

American Thistle	Geranium	Lily	Pine Forest
Apple Blossom	Honeysuckle	Mint	Rose
Bouquet	Jasmine	Narcissus	Trefle
Carnation	Lavender	New Mown Hay	Violet
Chypre	Lilac	Orange Blossom	Wild Flowers

National Association of INSECTICIDE DISINFECTANT MANUFACTURERS Incorporated 1914

P. R. DREYER INC.

12 E. 12th Street New York

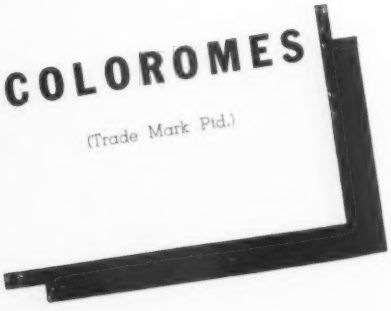
"It's the Odor that Sells the Product"

Felton

FOR THE MANUFACTURING OF

The Bouquet Tox series are odors which have been especially developed for use in Fly Sprays. At nominal cost, they will effectively neutralize any unpleasant odor in the spray and impart to it a clean, fresh scent, which will be agreeable wherever used.

Any of the Bouquet Tox odors will effectively neutralize the odor of Lethane.



Effective combinations of perfume and color for use with Para Dichlor Benzene and Naphthalene blocks and crystals. Powerful, economical and will persist until the last crystal has disappeared.

Coloromes are supplied in any combination of odor and color; also without color, if desired.

Let us know your problem and we will be

Felton

603 JOHNSON AVENUE

Manufacturers of AROMATIC CHEMICALS, NATURAL ISOLATES, PERFUME OILS, ESSENTIAL FLOWER AND FLAVOR

...n, Mass.
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...201 N. ... St.

Aromatics

DISINFECTANTS & INSECTICIDES

AQUAROME CASHMERE 912

(Trade Mark Pfd.)

A completely water soluble perfume oil which will not produce sediment, oil film or cloudiness. Will impart a pleasant, lasting fragrance to all preparations in which water is used as the base such as shampoos, permanent wave solutions, liquid soaps, deodorant sprays, etc.

Aquaromes are also supplied in many other odors.

FORMAROME VIOLET

The most effective product for pleasantly masking the odor of formaldehyde in sprays, disinfectant, embalming fluids and all preparations in which formaldehyde is used. A wide selection of other Formarome odors is also available to meet individual preference.

pleased to supply suitable samples and quotations.

CHEMICAL CO. INC.

BROOKLYN, NEW YORK

Executive Offices and Factory: 630 JOHNSON AVENUE, BROOKLYN 37, N. Y.

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San Francisco, Calif.
512 Washington St.

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STAINLESS CATTLE SPRAY

A light colored liquid for spraying cattle to rid them of annoying flies and insects. Contains the active principle of pyrethrum. Will not stain, blister or burn, and has no disagreeable odor. A popular product with farmers and dairymen. Supplied in bulk to the distributing trade only.

PES-TOX

An efficient liquid household insecticide of the pyrethrum type, pleasantly scented. Surpasses in effectiveness the standard of the National Association of Insecticide and Disinfectant Manufacturers. Each lot carefully controlled by the Peet-Grady method. Supplied in bulk for distributors to resell under their own trade-names. Also suppliers of pyrethrum concentrate.

PINE OIL DISINFECTANTS

made from pure steam-distilled pine oil, and agreeable in odor and dilute with water to form rich, milk-white emulsions.

HIPINE, made according to the formula of the Hygienic Laboratory has a minimum phenol coefficient of four.

ORPINE, prepared from slightly different ingredients, has a minimum coefficient of three.

CLEARPINE is a specially refined product, very light in color, and has a minimum phenol coefficient of five.

All are high-grade products, reasonably priced. Every lot chemically controlled and standardized. Supplied only in bulk to the distributing trade for resale under their own names and labels.

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SANITARY PRODUCTS

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

WITH the adoption of a simplified specification for liquid insecticides, and a means of making available to the industry a standard insecticide test solution, the recent meeting of the National Association of Insecticide & Disinfectant Manufacturers took what is perhaps the most important step thus far toward the eventual elimination of fakery and gross error in the comparative evaluation of insecticides. The specification and other details are described elsewhere in this issue. The committee which completed this work, as well as the committee engaging in similar work on disinfectant standards, deserve all the commendation which they received in the unanimously adopted resolutions of the Association.

FIRMS which allow their salesmen a percentage of the overage where sanitary products are sold to consumers above regular price-list quotations, cannot in our opinion be very proud of the practice. And yet, there are plenty of firms which do this very thing, who encourage their salesmen to get all the traffic will bear. Needless to say, the reputable leaders in the industry do not permit salesmen to alter prices, either up or down. They fix their own prices,—not the salesman. In fact we know of an instance where a salesman who sent in an order at a price very considerably above the price-list figure, believing in his shortsightedness that he was doing something clever. To his chagrin and surprise, he received a copy of a letter to the buyer stating that he had been overcharged, and a letter to himself stating that if he repeated the trick, he could look for a job elsewhere.

We do not say that splitting of overage is general practice, but we do say that it is quite common practice among a group of houses. Those who claim that they bill the goods to salesmen at a certain figure and he can resell the material for anything his competition will permit, are merely dodging the issue. This is legitimate practice only where the goods are sold to a bona fide jobber, but certainly not where they are sold by a company salesman to a consumer. In known cases of this kind, the charge of "racket" is quite obviously justified.

PERSONS not trained in the testing and use of disinfectants should be forbidden by law to engage in their manufacture. This was the expressed opinion of a Federal judge recently in fining and reprimanding a manufacturer of low-grade disinfectant sold for hospital and other uses after a conviction secured against him by the Food & Drug Administration. After learning that the so-called disinfectant was ineffective against all the common organisms even when used full strength, the judge stated that a fine of several hundred dollars allowed under the law was far from an adequate penalty in this case. That the public and the legitimate manufacturer should be protected more fully against things of this kind goes without saying. Disinfectant manufacture is not something which can be carried on in a cellar with a barrel and a shovel.

THE mosquito population of the United States east of the Mississippi River this summer will be sharply increased as a result of flood conditions this spring, say the entomologists. Well, as long as they use plenty of insecticide to kill off the mosquitoes when they do arrive, we suppose that we will be able to struggle through the summer.

Mid-Year Insecticide

THE adoption of a standard for liquid household insecticides and also of a plan for the distribution of a standard insecticide solution, a means for the adoption of more precise and rigid specifications for disinfectants, and a continuation of general publicity activities represented some of the high points at the 23rd annual mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers held June 8 and 9 at the Edgewater Beach Hotel, Chicago. Some two hundred persons attended the meeting of which something over 150 were officially registered. A number of prominent speakers were heard on various phases of disinfection, insecticides, and sanitary specialties. The meeting closed with an informal beef-steak dinner held June 9 in the Michigan Room of the Edgewater Beach Hotel and was accompanied by a floor show.

Among the resolutions adopted were those calling upon the Secretary of the Association to file with the Chairman of the Revision Committee of the National Formulary a protest regarding the specifications in the revised Formulary which establish the resistance of the culture of the organisms used to determine the antiseptic value of Liquor Antisepticus, N.F. A resolution of condolence to the family of F. O. Moburg, late president of Rex Research Corp., Toledo, was adopted. Resolutions of appreciation were extended to Dr. Alfred Weed and Wallace Thomas for their work on the insecticide standards committee, and to H. Marshall Clark and J. L. Brenn for their work on the disinfectant committees. For their handling of the golf tournament and other entertainment features, a resolution of thanks was extended to A. L. van Ameringen and R. S. Solinsky, as was one extended to the chairman of the program committee, H. W. Hamilton, and its members.

After much discussion, the Association authorized a further expenditure of money for publicity purposes which had been appropriated last December. This is to be used for a continuation of general constructive newspaper publicity by the American Institute of Sanitation which is the publicity name adopted for the National Association of Insecticide & Disinfectant Manufacturers.

A golf tournament was held on Sunday afternoon, June 7, preceding the meeting, at Bob-O'Link Golf Club, near Chicago. Forty members teed off. Owing to a high wind, the scores were all higher than usual. Three men tied for low gross honors with 87. These were H. Marshall Clark of Dr. Hess & Clark, Inc.; Charles Furst of Furst-McNess Co., and William Spear of the National Can Co. Low net was won by Dr. E. G. Thomssen of the J. R. Watkins Co. with R. H. Young of Davies-Young Soap Co., second, and H. J. Ahles of John Powell & Co., third.

The 1936 annual meeting and election of officers of the Association will be held early in December at the Penn Athletic Club, Philadelphia. That city was recommended by the Board of Governors to the membership and the decision to go to Philadelphia for the annual meeting was adopted unanimously.

Following the meeting in Chicago and the detailed discussion of disinfectant standards, revised specifications were made up and submitted to the membership through the Secretary's office by J. L. Brenn of the Huntington Laboratories, chairman of the disinfectant standardization committee. These new proposed specifications which are for interim consideration by the membership and for action at the annual meeting in December, are given below. Mr. Brenn has stated in accordance with the discussion in Chicago that his committee is going to move for the adoption of these specifications at the annual meeting. The specifications follow:

Specifications for Liquid Hypochlorites

Classification. Liquid hypochlorites are divided into three classes:—one, sodium hypochlorite alkaline with sodium hydrate, sodium carbonate or the other alkaline salts; two, hypochlorites which are essentially sodium hypochlorite and alkaline with calcium hypochlorite solutions alkaline with calcium hydrate.

Physical requirements. The hypochlorite solution shall be a homogeneous liquid. It shall be miscible with distilled water in all proportions. It shall be ready for dilution when delivered.

Chemical requirements. It shall have an available chlorine content of not less than 2.5 per cent and not more than 7.0 per cent as determined by the arsenious acid or the potassium iodine-starch quantitative methods. Its rate of deterioration shall not be more than 10 per cent of its original available chlorine content when stored in the original container for 6 months in a cool, dark place.

Identification. Each container shall be marked with the name of the material, the brand (if any) of the material, the name of the manufacturer, net contents therein, and date of manufacture or a code number by which manufacturer can determine date of manufacture.

Packing. The hypochlorite shall be delivered in standard, commercial containers of the size as called for in the schedule. Each container holding one gallon or more shall be stoppered with a closure having vent.

Delivery. (a) Delivery shall be made as called for in

Disinfectant Meeting

the schedule. (b) With each delivery, the manufacturer shall furnish direction sheets, showing proper dilution. One such direction sheet shall accompany each container.

Specifications for Pine Disinfectant

1. The product shall be manufactured from pure steam distilled pine oil and emulsifying agent.

2. It shall contain not less than 60 per cent steam distilled pine oil.

3. It shall contain not more than 10 per cent water, inert matter.

4. The phenol coefficient shall be determined by the F. D. A. Method of test against B. typhosus.

5. Any addition of hydrocarbon oils (such as kerosene, paraffin oil, etc.) shall be considered as adulterants.

6. The product shall make a stable emulsion in water of zero hardness when diluted at the rate of 5 per cent. This emulsion shall stand for at least 24 hours showing no sign of oil float (unsaponified or free oil).

Emulsifiable Coal Tar Disinfectant

1. The product shall be made from pure coal tar creosote (tar acid oil).

2. It shall contain not over 10 per cent water, inert matter, nor any hydrocarbon adulterants (kerosene, etc.) or water gas tar.

3. It shall contain not less than 65 per cent coal tar oils and acids.

4. The required phenol coefficient shall be determined by the F. D. A. Method of test against B. typhosus.

5. It shall make milky emulsions with water of zero hardness when diluted 5 per cent disinfectant with 95 per cent water when the disinfectant has a coefficient of 10 and under; and in a 2 per cent emulsion with disinfectants over 10 in coefficient; these emulsions shall show no oily float or sediment when stored for 24 hours at room temperature.

6. It shall remain limpid, showing no sign of naphthalene crystallization down to O'C in 12 hours.

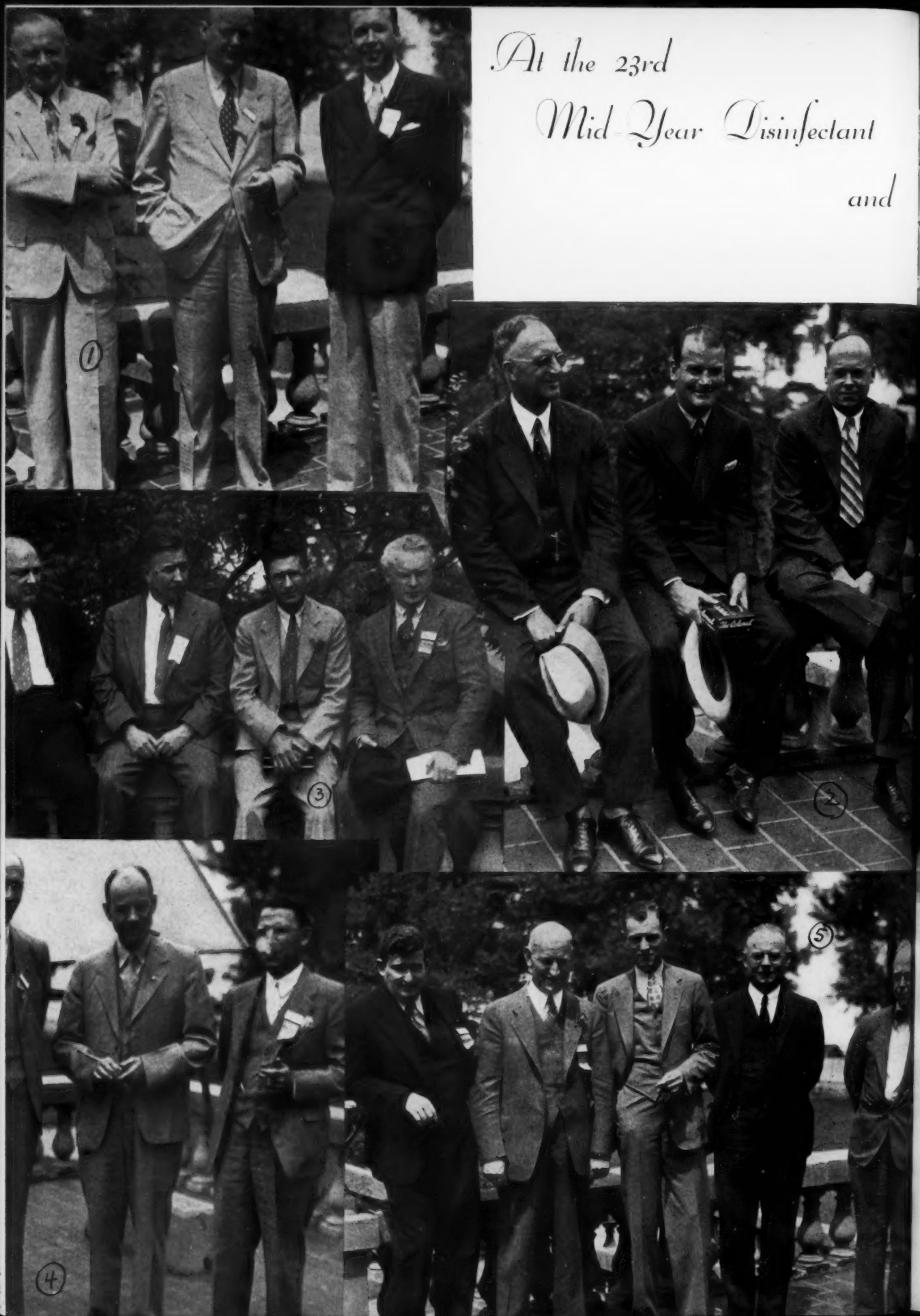
7. It shall conform to the Caustic Poisons Act.

8. The disinfectant shall stand indefinitely, showing no separation, no loss of germicidal value, or any form of decomposition (such as soap separating from the oil) under normal and reasonable conditions of storage.

All reports and addresses which are available are published in full elsewhere in this issue. The official registration list as issued by Secretary John H. Wright, follows:

E. J. Anderson—Acmeline Mfg. Co.
H. A. Olsen—Acmeline Mfg. Co.
Raymond Wransky—Acmeline Mfg. Co.
A. L. Hartung—American Can Co.
L. A. Trevisan—American Can Co.
Alexander Fabry—American Disinfecting Co.
S. J. Vance—Aromatic Products, Inc.
G. M. Baird—Baird & McGuire, Inc.
Harry W. Cole—Baird & McGuire, Inc.
Jack C. Varley—Baird & McGuire, Inc.
James Varley—Baird & McGuire, Inc.
H. W. Baldwin—Baldwin Laboratories, Inc.
C. M. Gwin—Baldwin Laboratories, Inc.
M. A. Yount—Baldwin Laboratories, Inc.
R. C. Quortrup—The Barrett Co.
J. N. Davies—Henry Barroll & Co., Inc.
S. H. Bell—S. H. Bell Co.
Talbot J. Albert—Black Flag Co.
W. G. Griesemer—Black Flag Co.
A. A. Breuer—Breuer Electric Mfg. Co.
Henry A. Nelson—The Chemical Supply Co.
Frank Shelhamer—Clean Home Products
B. Budweiser—Clean Home Products
Charles Hermann—Clean Home Products
J. J. Sorenson—Clean Home Products
G. E. Kummerson—Continental Can Co., Inc.
L. J. LaCava—Continental Can Co., Inc.
R. H. Young—The Davies-Young Soap Co.
R. W. Birdsall—Derris, Inc.
A. E. Miller—Derris, Inc.
R. A. Morris—Derris, Inc.
Clarence Weirich—C. B. Dolge Co.
R. J. Jones—Enoz Chemical Co.
M. J. Flanagan—Federal Varnish Co.
John H. Lawson—Federal Varnish Co.
E. L. Rhoades—Food Field Reporter
Joseph A. Ganer—Fritzsche Bros., Inc.
Melvin Fuld—Fuld Bros., Inc.
William A. Hadfield—General Laboratories
Dudley F. Lum—Givaudan-Delawanna, Inc.
M. B. Vance—Givaudan-Delawanna, Inc.
W. A. Simanton—Gulf Research and Dev. Co.
Wallace Thomas—Gulf Oil Corporation
Preston B. Heller—B. Heller & Co.
G. F. Hogg—Hercules Powder Co.
Paul Mayfield—Hercules Powder Co.
George C. O'Brien—Hercules Powder Co.
Friar Thompson, Jr.—Hercules Powder Co.
H. M. Clark—Dr. Hess & Clark, Inc.
Eugene McCauliff—Hooker Electrochemical Co.
M. C. Goodrich—H. D. Hudson Mfg. Co.
David P. Lewis—H. D. Hudson Mfg. Co.
Paul F. Loris—H. D. Hudson Mfg. Co.
J. L. Brenn—Huntington Laboratories, Inc.
J. H. Carpenter—Koppers Products Co., Inc.
G. F. Reddish—Lambert Pharmacal Co.
Emil Klarmann—Lehn & Fink, Inc.
J. C. Armstrong—Lowell Mfg. Co.
George H. Becker—Magnus, Mabee & Reynard, Inc.
G. A. Cammever—Magnus, Mabee & Reynard, Inc.
Harold G. Ophus—Magnus, Mabee & Reynard, Inc.
Peter Dougan—Merck & Co.
A. F. Frantz—Merck & Co.

(*Turn to Page* 119)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Mid-Year Disinfectant
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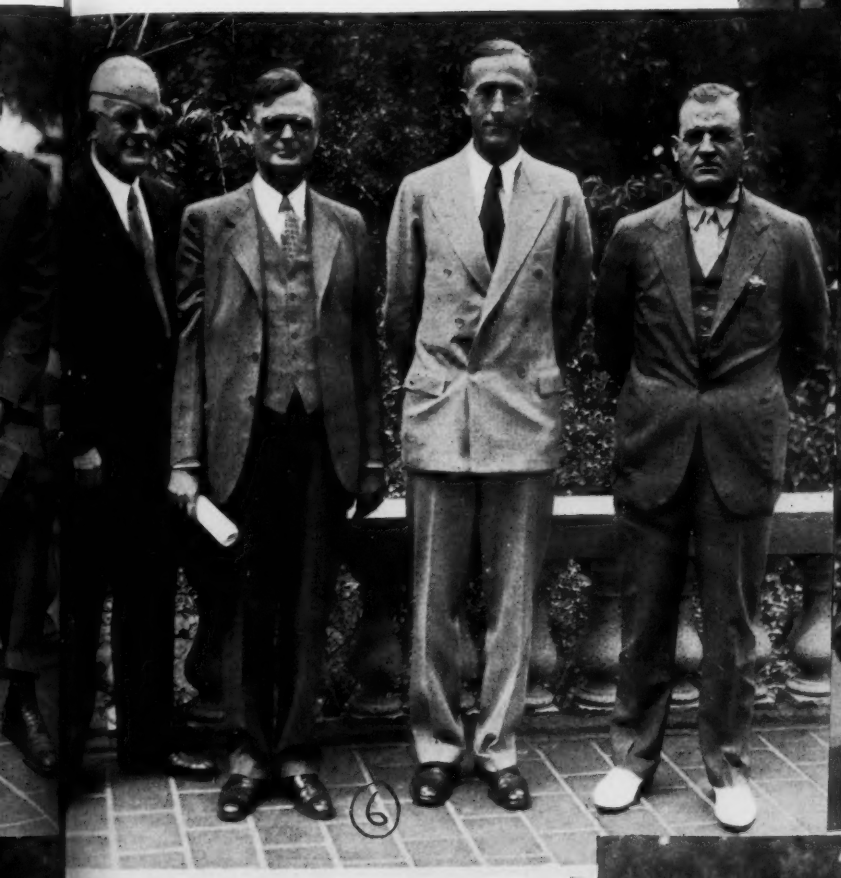
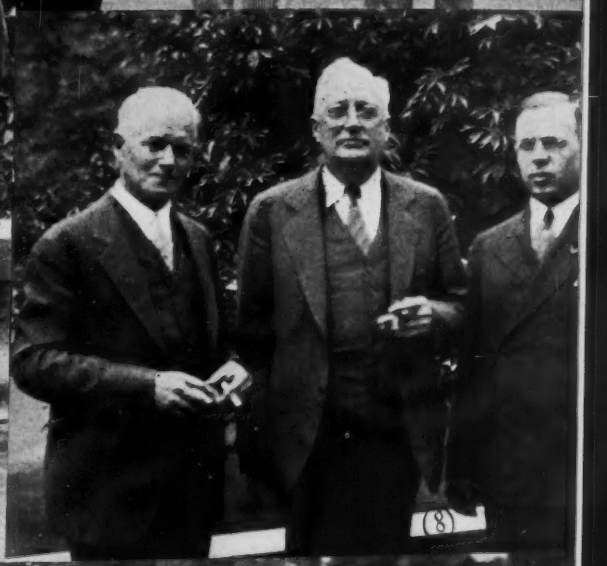
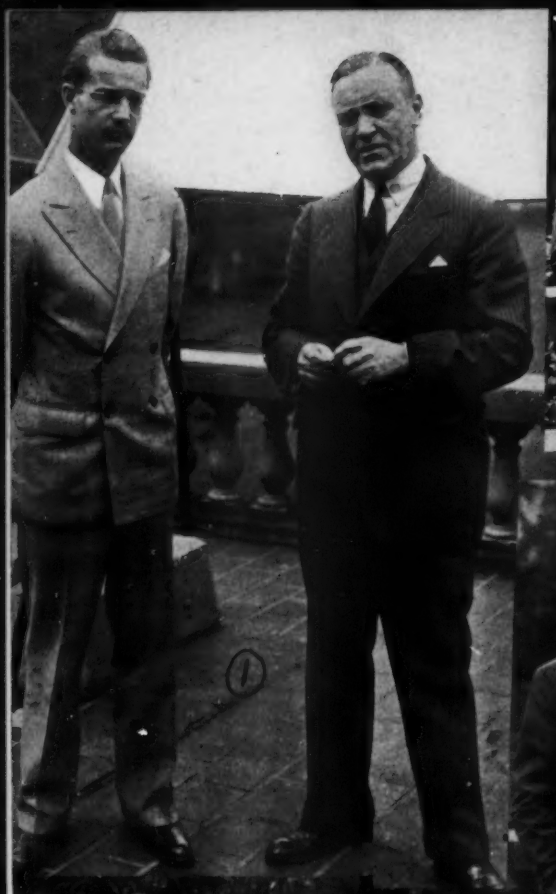
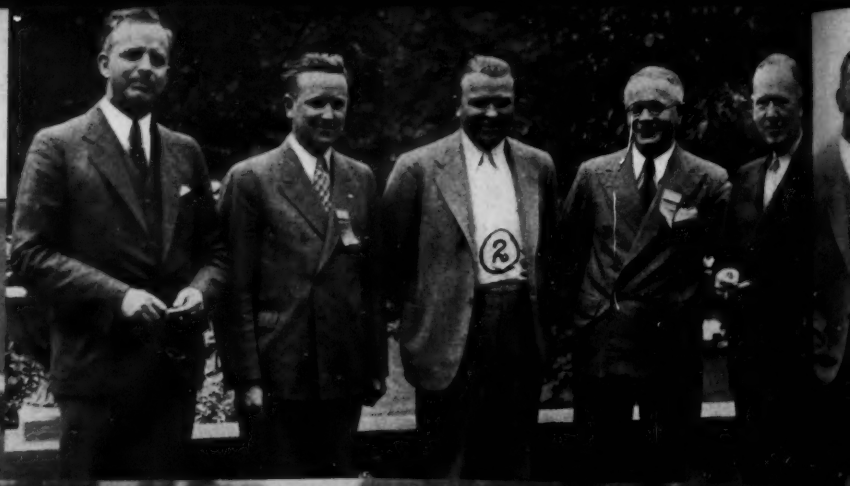
Insecticide Meeting in Chicago

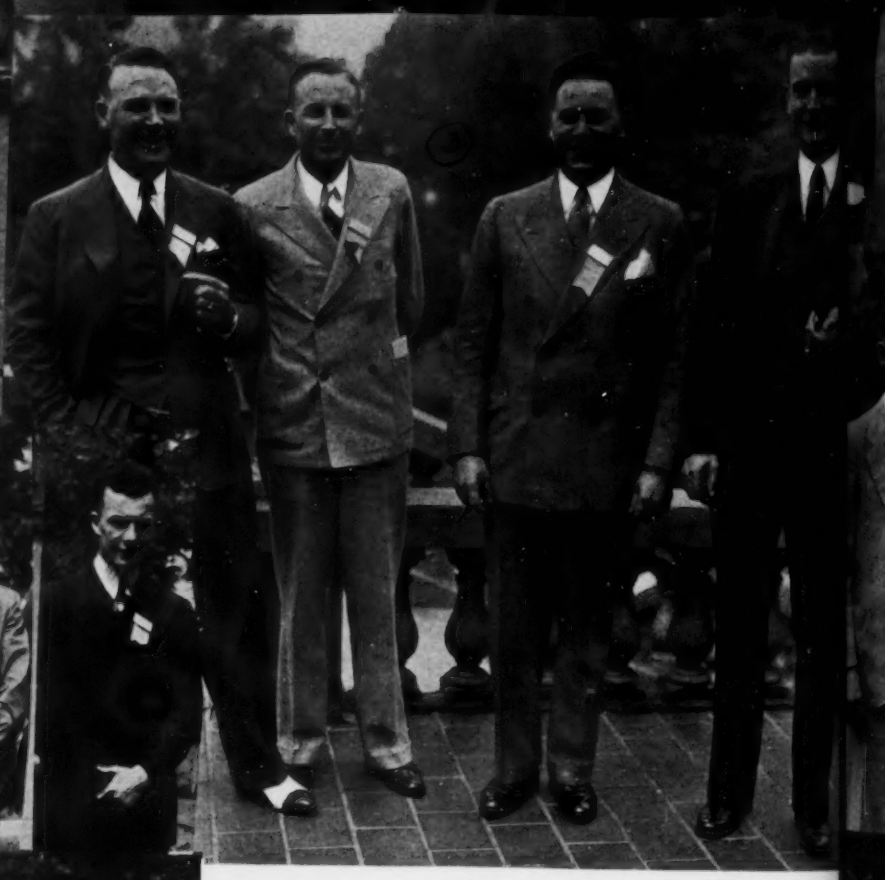


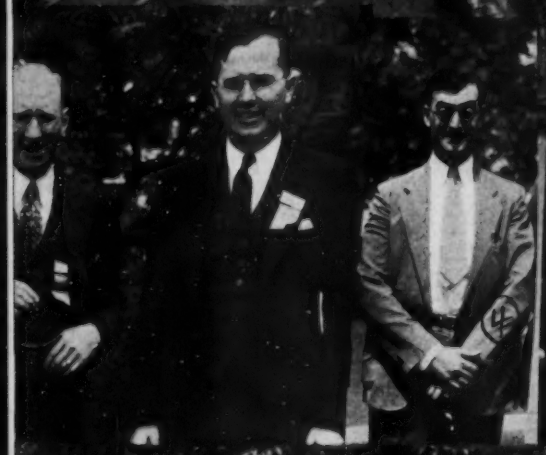


1. Dr. Klarmann of Lehn & Fink, and the Varleys of Baird & McGuire, Inc., father and son. 2. Dr. Thomssen and Ralph Boalt of J. R. Watkins, with Carpenter of Koppers. 3. Gothard of Sinclair, Dr. Campbell of Dept. Agriculture, Frank Nelson of Stanco, and Green of Standard Oil of Indiana. 4. Thompson of Hercules Powder, Badertscher of McCormick, and Gwin of Baldwin Laboratories. 5. Brand and Wolke of Sonneborn, Gordon Baird of Baird & McGuire, Hedenberg of Rex Research, and Philbrick of Skinner & Sherman. 6. John Wright, secretary, Griesmer of Black Flag, vice-president, Eddy of Rochester Germicide, president and Clark of Dr. Hess & Clark, vice-president. 7. The giants and La Cava, Weirick of Dolge, La Cava of Continental Can, and Young of Davies-Young. 8. Huckins of Sinclair, Murray of Edgar Murray Co., and Moburg of Rex Research. 9. Grady of Sinclair, Armstrong of Fly-Tox, Gothard of Sinclair, Weed of John Powell, and Simanton of Gulf.

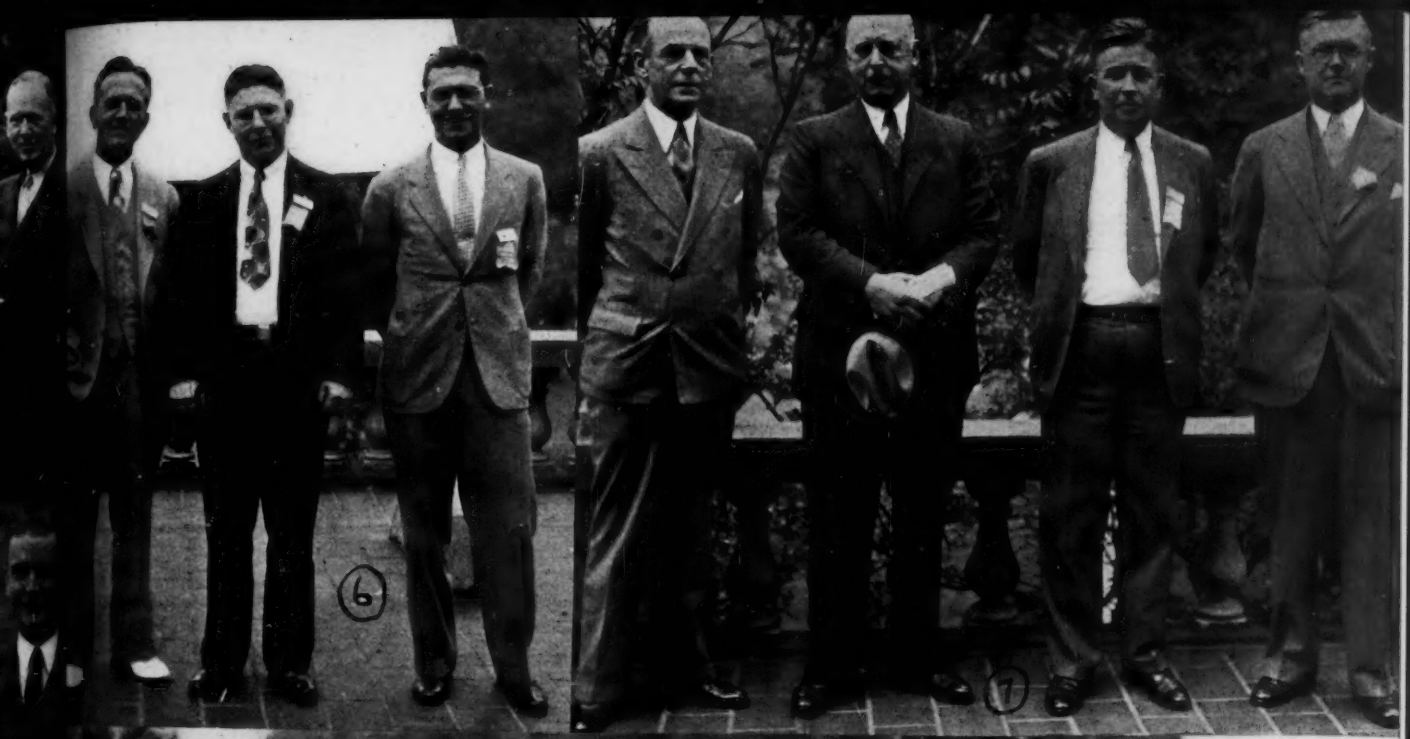








1. Klock, Jr., of Murray-Nickells, and S. B. Penick, Sr., of Penick. 2. Cowan, Standard of Ohio, Dunnican of Reilly Tar, Bohlen of Sinclair, and Lewis of Penick. 3. The Prentiss contingent—Bevernick, Whitmire, Prentiss, and Stoddard. 4. Mel Fuld of Fuld Bros., who has just seen a ghost, and Breuer, Jr., of Breuer Mfg. (subbing for his father). 5. Charles Furst of Furst-McNess, with the Hercules contingent. 6. Goodrich of Hudson, Henry Nelson of Chemical Supply, and 7. The Dept. of Agriculture contingent—Dr. McDonnell, Dr. Mohler, Dr. Campbell, and Dr. Roark. 8. Sturhahn of Monsanto smiles while Flanagan of Federal Varnish leads in prayer—also Lawson of Fed. Varnish, Jackson of West Disinfecting and 9. William Pollnow of Vestal and Taylor of Pease Labs. 10. Loris and Lewis of Hudson Mfg. 11. Meyer, Lewis, and Olson of Penick, Berry of Shell Petroleum, Selig of Selig Co., and van Ameringen of van Ameringen-Haebler, Inc.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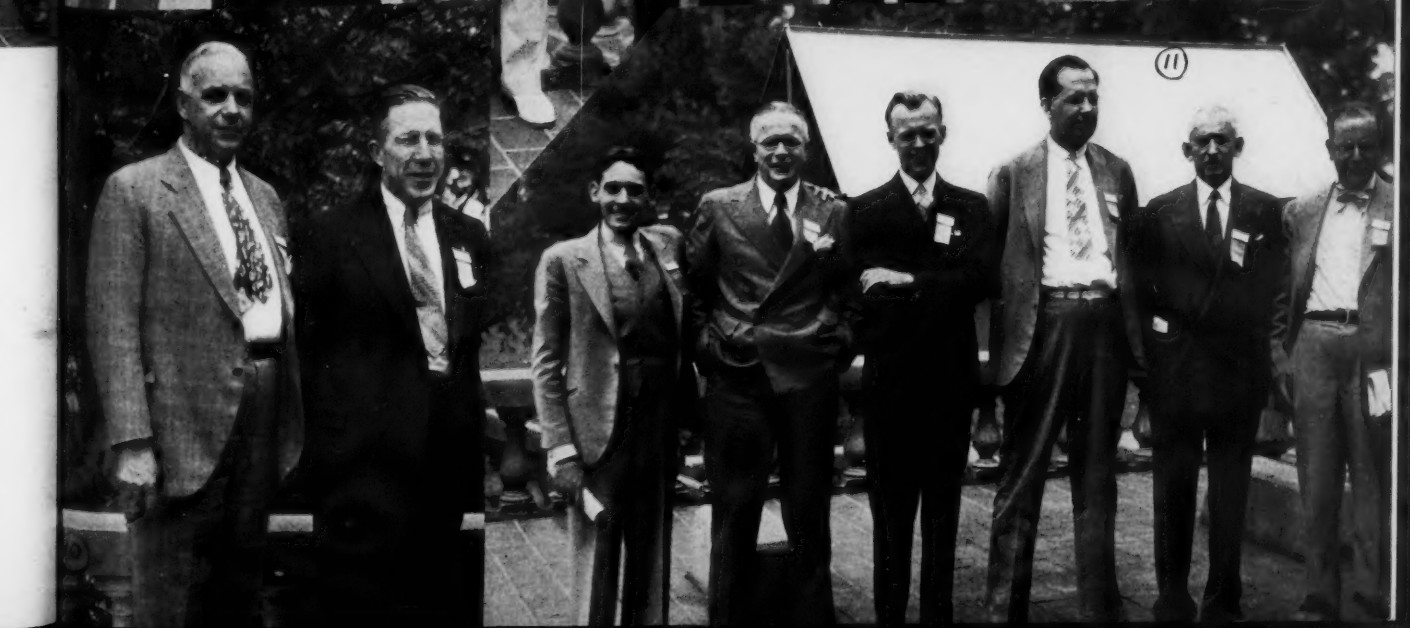
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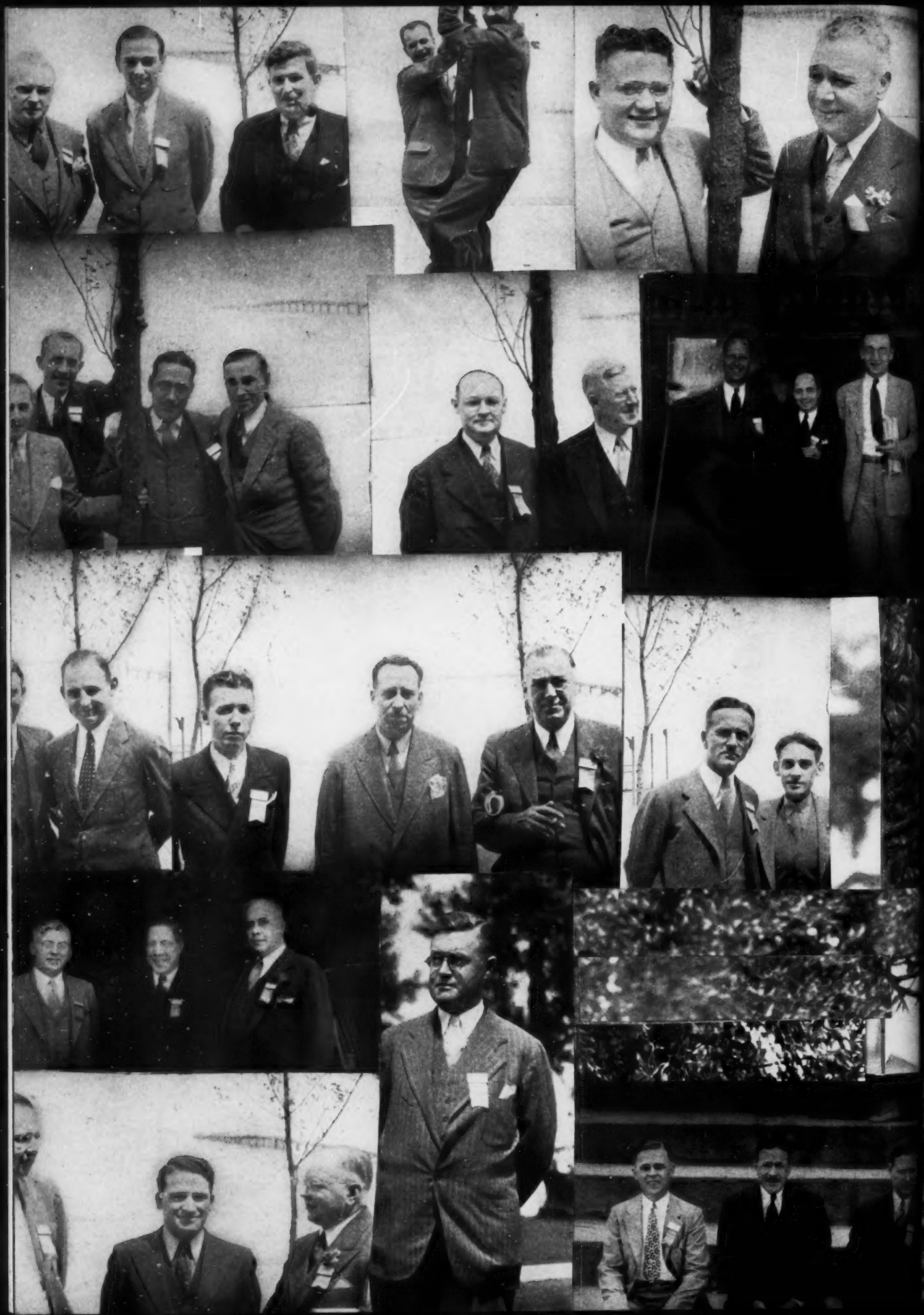

STANDARDS

What Shall We Do With Them?

By W. B. Eddy*
Rochester Germicide Co.

OUR industry has advanced a long way up from origins which might easily be confused with the early Indian medicine man. In the old days, our selling was done first and the laboratory work afterwards, if ever. Now we test all raw materials, carefully control the compounding, and rigorously prove the performance of our products before we put them on the market. As the result, a world-wide commerce in our goods has made their names synonymous with effective killing of insects and germs.

Criticism, however, pops up here and there, like garden weeds, some of it unfounded, some fair. Here sounds off an alleged research bureau, collecting so much per subscriber for "running off the chin" periodically against this or that nationally advertised product. There orates an educator, with a smattering of chemical knowledge, who tries to show that "it can all be done in the kitchen sink", and you may invest the saving in his new "cover-all" formula book.

Unfortunately, every such attack gets some hearing, makes some unfavorable impressions. It puts individual manufacturers on the defensive, with no opportunity for a fair defense before the same audience. Folks would rather hear someone sail into a product or a concern than listen to the victim's rebuttal.

As an association we can do something about this problem, something which separate members cannot do for themselves. Our past work has secured the general adoption of methods of tests for valuing the powers of different insecticides and disinfectants. Our next job is to find, endorse and make known fair minimum standards of quality for these products. Later in this session you will hear and have a chance to discuss the work of our two standards committees. These committees have worked hard and well on this important job, and they will go on to its completion after they have the benefit of your active criticism, pro and con. They welcome your ideas of additional products for which to develop standards.

The need for standards comes with the third stage of development of any competitive industry. In the pioneer stage, both the manufacturers and the consumers are groping along, gaining practical experience in a new field, finding out what fails and what succeeds. The public usually pays high for value received in this stage: and the public is to some extent a member of the experimental staff. Witness, for example, the early experiences of the automobile field or the auto tire business, when the user bragged if he completed a short use of either product without trouble. In the second stage, the manufacturer has well learned what it takes to do the right job, holds to the standards of his experience and that of his trade, turns out a reliable product at a fair price.

The third and troublesome stage arrives when, by reason of business decline and because of easy entry into manufacturing a commodity, more producers enter the field and turn out more goods than the market will readily absorb. Here the consumer first feels the benefit of cut-throat price war but later suffers the inevitable consequences of sub-standard merchandise. Where price becomes the only factor for obtaining business, price also commands the showing of a profit on orders taken below cost. Methods of adulteration are regrettably simple in our line. A little bag of pyrethrum is waved around in a barrel of kerosene and lo—, there is a barrel of 37c per gallon fly spray. A little fairly good coal tar disinfectant is spiked into a lot of emulsified kerosene and presto—a barrel of disinfectant is made, with 5, 10 or more co-efficient, according to what the buyer wants to be told.

How far this association can go as a policing body is a question; but can we throw our weight in favor of honestly built products by adopting a set of standards, making them available to both the consumer and to all producers, and by endorsing products that meet those minimum standards.

There are plenty of objections to this procedure. We certainly do not want these standards to be in the nature of formulae for obvious reasons. Formulae belong to those who have bought them with expensive research work. Standards should be based on the minimum result to be secured from use of the goods, plus reasonable chemical restrictions for the benefit of the consumer.

It may be said that some of us will be too proud to acknowledge that our products may be compared with any minimum standards. We throw an air of mystery about our laboratory work; but the kitchen sink manufacturer uses that same air of mystery to disguise his concoction and put it apparently on the same quality footing with the goods of the reliable maker. The customer doesn't know one from the other. He listens only to the salesman, generally buys the cheaper product and

* Address of the President, mid-year meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., Chicago, June, 1936.

later reads derogatory articles on such goods, concludes that they are all a racket.

If we adopt satisfactory minimum standards, can we and will we use them to raise the average of integrity and of quality in our industry. Haven't we the power to approve satisfactory merchandise and, by omission, to cast a doubt on the unsatisfactory.

Gentlemen, you are going to receive the reports of the disinfectant standards and the insecticide standards committees, reports based on experienced, intelligent work. I hope you will discuss them fully from every angle to discover whether the suggested standards are satisfactory and practical, or whether they shall be given further study and change before adoption. If you adopt these or other standards, I shall consider that you do not want them buried in our secretary's file, but that you want to use them. Use of such standards may include publishing them in circular form, available to the purchasing public, upon request. It may go much further. We may develop a plan for registering products which meet or excel the standards, assigning official association registered numbers and official seal, to be used in the advertising and on labels and literature of the products. This will involve an official impartial plan for selection of samples and methods of test. It may be open to non-members as well as members of the association. Lists of approved products could be made available to prospective purchasers. The publicity and the selling power of this association could be used to promote the acceptance of goods by the discriminating buyer, only if those goods are up to the minimum standard of quality.

Such a plan contains tremendous sales advantages, for sellers of certified products, over the uncertified, carries an added measure of protection to the buying public, and, at the same time, is packed full of potential dynamite, from the standpoint of potential mis-use.

Development of the project of putting standards to work will be worked out by a new Standards Executive Committee, when you adopt standards. Meanwhile, let's give our keenest thought to those standards which are later to be submitted, for they may constitute the most progressive forward move that this association can undertake.

LEGISLATION

By John H. Wright*

THE principal purpose of my report, as Secretary, has always been to summarize the legislative developments during the previous six months. This year this is unusually difficult. The most important legislative proposals have been Massachusetts House Bill No. 420 (now House Bill No. 1848), New Jersey Assembly Bill No. 116 and, most important of all, the new Federal Food and Drugs Bill, commonly known as S-5. Congress and the Legislatures of both Massachusetts and New Jersey are still in session. All of these matters are pending and the situation may change over night.

S-5 was reported in a modified form by the House Committee on Foreign and Interstate Commerce on May 22nd. In some respects the bill is now radically different from S-5 as it passed the Senate. You have already received an analysis setting forth in detail the changes. Some of them are in my opinion of the utmost importance. However, at the time this is written (June 5) it begins to look very much as if there will be no Food and Drugs Bill at this session of Congress.

I sincerely hope that this will not be so and that a bill approximating S-5 as it went to the House may become law. There are serious objections to some of the changes which were made by the House Committee. These probably could be changed either on the floor of the House or in conference, if the bill receives consideration at this session. However, if no action is taken, as it seems likely, there is no question but that a new Food and Drugs Bill will be introduced next winter, which may be very drastic in form and will probably throw the matter back into the same situation that existed two years ago. This would be most unfortunate.

Legislative proposals which would have a serious effect upon the members of the industry are still pending in both Massachusetts and New Jersey. You are familiar with the details from the bulletins. Your Secretary's Office and various members of the Association have worked intensively on these matters in full cooperation with other Associations. We hope the situation is well in hand and that neither proposal will become law, unless amended in such a way as to protect your interests.

As you know, bills of serious import were under consideration in both New York and Rhode Island. We are glad, however, to report that in both states the Legislatures have adjourned without passing any of these proposals. A session of the Legislature has just been opened in Louisiana and already three important measures have been introduced. One is a new Food and Drugs Bill, modeled closely along the lines of the Federal S-5. We hope we can prevent the passage of any such legislation until such time as a Federal Law has been adopted. It would be most unfortunate to have State Laws passed in conflict with the Federal requirements. One of the Louisiana Bills requires a license fee of $300.00 from each retail dealer handling any proprietary or patent medicines. Please do not forget that many of your

* Report as Secretary and Chairman of Legislative Committee before annual mid-year meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., Chicago, June, 1936.

products would be considered as coming under this classification.

In closing, I wish to express my appreciation of the very efficient cooperation which a number of members of this Association have given the Legislative Committee. They have acted promptly and I believe effectively every time they have been called upon. If the work of this Committee is to be successful, it can only be through the full cooperation of the entire membership. I hope in the future that we will have this cooperation from an even greater number than in the past.

Your Association has been working in close cooperation on legislative matters with other groups having similar interests. I refer particularly to The Proprietary Association, The Manufacturing Chemists' Association and The Associated Grocery Manufacturers of America. We have had an unusually busy six months, in spite of the fact that this is an "off" year with the State Legislatures. It is the earnest desire of everyone associated with the Secretary's Office to make the work as valuable as possible to the members of the Association. We would appreciate and welcome frank, constructive criticism.

Disinfectant Standards

By H. Marshall Clark*
Dr. Hess & Clark, Inc.

BECAUSE of the breadth of the field covered by the Disinfecting Committee—General, it was decided that this committee be divided into several sub-committees each headed by a member of the Disinfectant Committee—General. Each sub-committee would have on it a representation of each type of disinfectant manufacturer—chlorine, coal tar and pine oil.

The sub-committees decided upon at this time are:

1—raw materials
2—manufacture
3—sales and advertising
4—use and labelling

Others may be added or further divisions made as they become advisable.

STANDARDS AND SPECIFICATIONS:

The subject of Standards and Specifications naturally received the consideration of the Committee. It is recommended that Standards and Specifications be delineated and not considered as synonomous. Standards should be considered idealistically for the purpose of raising the quality of our products and specifications as means to arrive at standards and uniform specifications for the simplification of bidding on and manufacture of products which are purchased on the basis of specifications.

STANDARDS:

Minimum standards of quality as to coefficiency, emulsion, absence of adulterants, safety, etc. if adopted by the Association would tend to raise the quality of the products of our industry. In this sense standards are idealistic. However, standards have other practical or commercial advantages.

Coupled with a system of certification these standards would make good publicity and advertising material, which would at least help to overcome the unfavorable publicity to which we are continually subjected.

Standards would provide a method of self-regulation which is more desirable than federal or state regulation.

Standards and Certification would raise the value of the Association to the members and prospective members.

Certification would give the purchaser knowledge that the material purchased would do a given job of disinfecting.

Standards might be carried on back from the finished product to raw materials and likewise the Certification. This would make specifications the more valuable to the manufacturer and the purchaser of the finished product.

SPECIFICATIONS:

Specifications have more to do with the character of materials used in the manufacture of a product.

Uniform specifications would be desirable for the simplification of bidding on and manufacturing of products that are purchased on specifications.

This would save duplication of work by Associations of purchasing agents or departments and create good will toward the Association.

As an Association we owe to the purchasing public information by which they may purchase intelligently. Failure to supply such information upon request creates bad will toward the Association.

Uniform specifications would tend to reduce the range of bidding on contracts which would raise the industry in the esteem of the purchaser.

Uniform specifications might be above or below standards adopted by the Association but their tendency would be to help accomplish these Standards.

Uniform specifications would tend to simplify labelling.

It is assumed that specifications would be revised as frequently as necessary to incorporate new materials and new manufacturing methods. Uniform specifications should be disseminated to associations of purchasing agents and others by this Association and be available on request.

It is felt by this Committee that serious consideration should be given the adoption of either Standards or uniform Specifications or both.

(See also report on proposed specifications by J. L. Brenn, pg. 104, June, 1936, SOAP, and pg. 92, this issue.)

* Report as Chairman, General Disinfectant Committee, before the annual mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1936.

Insecticide Standards

By Wallace Thomas*
Gulf Refining Company

THE adoption of a simplified specification for liquid household insecticides by the National Association of Insecticide & Disinfectant manufacturers at the annual mid-year meeting in Chicago on June 8 and 9 follows a long study of this subject by various committees of the Association and more recently by the Insecticide Specifications and Standardization Committee headed by Mr. Thomas, and the Committee on the Testing of Insecticides headed by Dr. Alfred Weed. The simplified specification and the plan to supply an official standard control insecticide for test purposes were presented at the recent meeting of the Association in Chicago and adopted.—EDITOR.

The report follows:

The following simplified specifications of a household liquid spray type insecticide are presented to you for the Association's official approval or rejection. Many hours and months of labor have resulted in this particular proposal. If it is adopted, we can then work on other matters, but we thought it highly advisable to complete this one job first.

It is not a proposal hastily gotten together, but one of mature and detailed deliberation, not only on the part of all members of this Committee, but also on the part of all members of the Methods of Testing Insecticides Committee.

I shall now read the proposal. It is headed:

SPECIFICATIONS

Household Spray Type Liquid Insecticide

1. A household spray type liquid insecticide, when tested by the Peet-Grady method and in conjunction with the N. A. I. & D. M. official Control Insecticide and in accordance with the methods prescribed in the printed directions accompanying each standard package of control insecticide, shall yield an average kill not less than 95 per cent of the average kill obtained by the official Control Insecticide.
2. This particular insecticide shall be harmless to man and warm blooded household animals when used as directed.
3. When sprayed as directed, it shall not stain fabrics, wall paper and general household furnishings.
4. When used in the customary manner, it shall not penetrate closed packages of food materials commonly found in homes.
5. It shall not corrode metals.
6. It shall have no objectionable odor, and no particular odor shall be specified.
7. It shall have a flash point not less than 125° F. when tested in the Tagliabue closed cup.

Official Control Insecticide

By Dr. Alfred Weed*
John Powell & Co.

Plan to supply an official standard control insecticide, presented by the Committee on the Testing of Insecticides, Chicago, June 8, 1936:

Pack approximately 1,600 6 oz. amber bottles with a standard control insecticide, sealed with the N. A. I. & D. M. Seal, and packed in closed mailing tubes (12 to a carton).

Method of Preparation: Procure 4-8 (½ to 1 gal.) samples of 20 lb. per gal. Pyrethrum concentrate from Association members who have already purchased these concentrates from 4 to 8 different member concentrate manufacturers.

Procure 10 gal. of insecticide base from 8 member refiners.

Combine the concentrates. Combine the insecticide bases.

Combine the combined concentrates and combined insecticide bases, using 1 volume of concentrate to 19 volumes of insecticide base. Filter through paper or cloth.

Pack the finished insecticide in 6 oz. amber bottles.

Attach labels to the bottles bearing the following wording:

National Association Insecticide & Disinfectant Mfrs. Official Control Insecticide not valid if used after December 31, 1936.

Wrap the bottles in a double thickness of brown kraft paper to exclude all light. Seal the brown paper with a gummed label bearing the following wording:

National Association Insecticide & Disinfectant Mfrs. Official Control Insecticide not valid after December 31, 1936; not valid unless this seal is broken immediately prior to making comparative tests.

The blending, packing and shipping will be supervised by the Association Secretary.

All payments of invoices will be authorized by the Association Secretary.

All invoicing of 6 oz. bottles shipped will be invoiced by the Association Secretary.

It is suggested by this Committee that the Secretary

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The Sanitary Supply Dealer

By Melvin Fuld*

Fuld Brothers, Inc.

REVIEWING the past reports of this Committee it appears that these reports covered a wide number of things, as would be expected from a Sanitary Specialties Committee. After a thorough review it appeared a natural thing for the Committee to ascertain what the average Sanitary Specialty Dealer thought of us and our discussions on the products they handled. Information on the question — of what the Sanitary Specialty Dealer expected from us as an Association—was obtained from a total of seventy-two (72) interviews with dealers throughout the country, together with a large amount of correspondence.

The original report of this Committee was a summary of these interviews, divided off into the various issues that were brought out. But after the original draft was made the Committee felt that it would be better to give an interpretation of the ideas which were given to us rather than the ideas themselves. The salient features were studied and the following is the result:

We believe that this Association might (1) Strengthen its legislative power, and (2) Improve selling conditions, by developing such organization activity which might be expected to arouse the sympathy and cooperation of those who are now outside of our association.

In submitting this report, which is in the nature of a suggestion, we ask that it be received not as a criticism of present or past activities, but rather as a tribute to the rugged foundation and the gifted leadership with which this association is endowed, and which together make it possible to accomplish goals hitherto impossible.

We are aware that we have passed the period of general and widespread persecution of competitors. We have long since learned to enjoy that measure of security which comes with an era of toleration. But we must admit that we have yet to reach any real fraternalism in the industry as a whole.

As leaders of this industry we must accept the responsibility for the improvement of the *entire* industry. We can no longer afford to delay that important and necessary end by the barbaric precept that a competitor is anyone who seeks to trade in territory which we please to call our own. We believe that we might do well to recognize only two competitors — Filth and Ignorance. It is these two competitors which we encounter at every step and in every business transaction which are robbing the industry of unestimable millions in sanitary supply profits. In order to speed the day when this industry shall enjoy the fullest respect of the buying public, which will in turn unfold to us new heights of usefulness, activity, and profit, we must gain the confidence and sympathetic cooperation of hundreds of smaller manufacturers and dealers, who in the aggregate wield important influences upon the conduct of the entire trade, and upon the legislation which affects the trade.

The tremendous influence upon the selling methods of the trade is readily illustrated in the recollection of reform after reform in trade practices, which have been relegated to the scrap heap because of the apparent pressure of too many unassociated manufacturers who forced the reform advocates, one by one, to give way.

And in legislative ventures it has been only too apparent that strength comes from the number of businesses represented rather than the volume of business affected. Politicians are still interested in counting noses and for this reason, along with the one expressed above, we must confess that we need the small manufacturers.

We have much to offer any manufacturer, but unfortunately most of our contributions would be in the nature of intangibles—fellowship (that he hasn't learned to appreciate)—Inspiration (for which he doesn't feel the need)—information (which he distrusts).

We can scarcely expect to make an appealing spectical on the above basis to our contemporary industrialists, many of whom are not yet convinced that the whole sanitary supply business is not a racket. And furthermore, among the smaller manufacturers there are many who can ill afford to spend the time required, or perhaps the money necessary, to take an active part in association work and convention activities.

Yet, assuming that we do not want to bring these smaller of the industry's representatives within the influence of the organization, we ask you to consider the following recommendations for further study:

1. To foster adequate sanitary reforms in every community.
2. To create a class of membership which will allow willing manufacturers to give their aid to this work.
3. To prepare standardized advertising claims and sales claims and label claims for all standardized merchandise.
4. To develop state meetings held more frequently so that competitors may gain confidence in their fellows.
5. To develop standards of service by the education of salesmen.
6. To develop standards of quality and of buying where such is practicable.
7. To publicize unfair buying and selling practices.
8. To develop sanitary supply activities which will warrant more conspicuous attention by newspapers and publications.

* Report as Chairman of Sanitary Specialties Committee, annual mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1936.

Dips and Disinfectants

In the Warfare Against Animal Diseases

By Dr. John R. Mohler*

Chief, U. S. Bureau of Animal Industry

AS suggested by the title, warfare against animal diseases is a reality. The various bacteria, viruses, and parasites which seek to attack the extensive livestock industry of this country are aggressive, persistent, and ruthless. Their species number in the thousands and the combined battle strength of their forces in individual numbers runs, of course, into so many millions as to stagger the imagination.

Yet through diligent research, man has not only devised means of keeping such enemies at bay, but he has succeeded, in several noteworthy cases at least, in virtually annihilating certain species of pests. His aggressive campaign against cattle ticks in the South has reclaimed about 91 per cent of the area formerly infested with the southern cattle tick. In the western range areas where the sheep-scab at one time held sway over a large domain, this enemy has been routed in crushing defeat. Throughout the country at large the aggressive drive to eradicate bovine tuberculosis has gone forward so successfully that 39 entire States are now modified accredited, which means practically free from such infection, and the work is progressing rapidly in the remaining 9 States.

As manufacturers of insecticides, disinfectants, dips, and related products, members of your organization have exerted a most important influence in warfare against animal diseases. Through technical skill and effective distribution, you have provided the necessary materials for effective chemical warfare. This type of warfare, moreover, is successfully carried on, not only by veterinary leaders, but by practical stockmen. Through intelligent use of chemicals prepared in suitable form and strength, livestock owners have been able to rid their barns, other buildings, and premises of unwelcome pests to which their livestock would otherwise be hosts. Thus the very important services which members of your organization have rendered in the past and continue to render is readily apparent.

I judge that your present interest more specifically involves the procedures that are being used by our Bureau of Animal Industry and cooperating officials in continuing along several fronts this warfare against animal diseases. You are naturally interested also, I judge, in progress of research work and other developments which have a bearing not only on official veterinary measures but also on recommendations to stockmen and others who are likely to need and use chemical products of the kind under consideration. Let us consider, first, typical sources of disease for which improved methods of control and eradication are being sought.

The ultramicroscopic or filtrable viruses present superficially the simplest mechanism of existence. These minute infectious particles can multiply only in presence of living animal tissue, sometimes thriving in but a single type of tissue, and frequently in only a single species of animal. They are exceedingly infectious to susceptible animals. Inhalation of a dust mote, or the bite of a mosquito, may be sufficient to implant the infection. The common biting stable fly is believed to be an important vector in the dissemination of hog cholera from one herd to another over considerable distances.

More variable in their characteristics are the bacteria and the fungi. These range all the way from forms which normally live in the soil or in decaying organic matter and which only occasionally infect animals, to species whose life processes ordinarily remain in abeyance unless they become implanted in a favorable situation in an animal host. As a rule in contrast with filtrable viruses, bacteria and fungi can be propagated in suitable artificial culture media, in entire absense of living animal tissue.

Pathogenic protozoa, at their simplest, behave much like bacteria, and fungi. But, owing to their higher position on the evolutionary scale, they have been able to develop many curious forms. At the extreme of complexity, like the filtrable viruses, they have become so highly specialized that multiplication is possible only in presence of living animal tissue. Some have gone even further and require an alternation of hosts of different types in order for the cycle of development from one generation to the next to become complete. The organism, or plasmodium, as it is technically termed, responsible for tick fever of cattle in the Southern States, thrives both in the blood of cattle and in the tissues of the tick. It passes into the eggs of the tick and so into the next generation of ticks which are then able to infect susceptible cattle to which they attach themselves. The versatility of the protozoa may be better appreciated when it is realized that worms and insects, though showing advances in details, have been unable to invent any basic improvement in schemes for carrying on their own individual and racial existences at the expense of animal hosts.

The past two generations have witnessed a tremendous decrease in the prevalence of infectious diseases among

* Presented at the mid-year meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., June, 1936, Chicago.

human beings. Much the same condition has been true of infectious animal diseases, although several still take a heavy toll. Bang's disease (infectious abortion) has seriously cut into the productiveness and the procreative renewal of the dairy herd; pullorum disease has threatened the profitable conduct of poultry raising; the infant pig, even though largely freed from the menace of hog cholera, has to face the threat of other serious ailments before it reaches the age of commercial utility.

Public health has improved in proportion as responsibility therefor has become a public function. With increasing density of population the individual has become correspondingly more exposed to infection. Therefore, under the authority of the State, regulations are promulgated to assure the purity of food, milk, water and air, the sanitation of shops, restaurants, vehicles and places of public assemblage, the reporting of cases of infectious disease and the segregation of carriers, the immunization of the populace, especially the children. When we control the living conditions of the animal population in the same way we get similar results. Contagious pleuro-pneumonia of cattle entered this country in 1843. It spread until its menace to the livestock industry was the decisive factor which induced Congress to establish the Bureau of Animal Industry in 1884, and subsequently to clothe it with broad authority. As the result, the disease disappeared in 1892. I need not remind you of the several outbreaks of foot-and-mouth disease successfully combatted. Coming nearer your own field, in the gay nineties the sheep industry was going into a decline because of scabies. Official dipping in interstate transportation failed to strike at the source of infection, so in 1905 a Federal quarantine was placed on nearly 1,800,000 square miles. According to the last report of the Bureau, infection remained only in scattered flocks that comprised but 80,000 sheep. Eradication of the cattle fever tick was seriously undertaken in 1906. In the last report of the Bureau it was stated that 91 per cent of the original quarantined area has been released. In 1917 almost 5 per cent of all the cattle in this country were tuberculous, but in 1936 only about 0.5 per cent are so affected.

It is true that some animal diseases may be conveyed to human beings. By and large, however, the problem of animal disease is fundamentally an economic problem. People raise livestock and chickens as a livelihood. It costs money to acquire disease-free breeding stock and more money to keep out infection from the herd or flock. The owners, acting individually, may simply be unable to stand the expense, and so disease may insidiously increase and spread. Eventually the situation becomes so economically menacing that the public at large realizes that something must be done, empowering legislation is passed, and warfare against that particular disease becomes a public function.

The genial Leland O. Howard, who did such effective work as chief of the Bureau of Entomology, long ago pointed out that man must wage unremitting warfare against insects. Dr. Maurice Hall, recently of the Bureau of Animal Industry, in a new book has extended the thesis to cover animal parasites in general and draws parallels to military operations in strategy and tactics. A discreet use of analogy may not be out of place.

It is sometimes wisest to run away from an enemy, to evacuate, temporarily at least, territory too strongly held by hostile forces. Pastures infected with anthrax or with eggs of the sheep stomach worm, poultry yards teeming with the cocyste of coccidia, hog lots sprinkled with the eggs of swine ascarids, fall in this category. But flight is entirely out of the question in dealing with most animal diseases. Purely defensive measures constitute the next obvious step. So we maintain a strict quarantine against the importation from foreign countries of animals or products of any kind which conceivably might bring within our borders the infection of foot-and-mouth disease, rinderpest, or in fact any animal disease, whether it already exists in this country or not. Even after a disease has gained a foothold, it may be still possible to prevent its spread, through rigid quarantine and the application of approved sanitary measures.

Another defensive weapon is sometimes extremely powerful; vaccination. Right now we are intensively working to bring to pefection a vaccine against hog cholera. This so-called "crystal-violet vaccine" was the last contribution of our Marion Dorset before his untimely death last July. I know that many of you now present had contacts with Dr. Dorset while he served on the old Insecticide and Fungicide Board. Such persons will appreciate how we miss his genial personality and wise counsel. Vaccination is a defense of merely the individual animal. It is often, therefore, rather expensive, but yet may be a highly practical method for suppressing disease. Also, under defense measures I may mention good nutrition and care. Many pathogenic bacteria fail to get a foothold on animals which are well nourished, properly housed and not subjected to undue fatigue or excitement. Lowered resistance caused by the vicissitudes of shipping may give the germs their chance. Hemorrhagic septicemia is so notorious in this respect that it is popularly known as "shipping fever."

Valuable as defensive measures may be, still they only temporize with the condition in the hope that the infective agent will perish in due course for want of nourishment. To search out and destroy the infective organisms in their lairs is often sound strategy and ultimate economy. That is the policy we have so successfully followed in our several combats with foot-and-mouth disease. It then involved the destruction of the infected, as well as the exposed animals, for there was no other way to destroy wholly the infection. A similar method is being followed with tuberculosis and with Bang's disease, though in these cases the immediate financial outlay is reduced through the salvage value of the slaughtered animals. With scabies of sheep and cattle and in the campaign against the fever tick, the affected animal is frequently

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Extended Uses for
Coal Tar Disinfectants

By Dr. E. G. Thomssen*
J. R. Watkins & Co.

THE feasibility of multiplying the utility of a product is of interest to any manufacturer. While new uses encroach upon the consumption of some competitive product, the fact is most often true that the extended use of the old and the new results in increased consumption of the two. This is due to the consumer's interest in new uses of something he is already familiar with. All normal consumers have some of the research spirit in their make-up and like to try out something novel with which they are impressed. It is important that this characteristic be cultivated not only through the development of new uses for a product, but also through proper education of the consumer so he may know how to properly apply them. This association, in my brief acquaintance with the activities, has not been remiss in this regard and is to be congratulated upon the work done to extend constructively the scope for use of products made by its members.

In the company with which I am connected, we have developed this idea quite successfully with a number of products in the insecticide and disinfectant field. Many suggestions for new uses have come to us from our dealers through the consumers themselves. In spite of the fact that it requires a lot of missionary work in the form of bulletins and personal contact to put new ideas across with the farmer with whom we do most of our business on these items, the results are usually well worth the effort.

Within recent years, though not so much at present, the let-down in activity in the building and transportation industries has from time to time built up surpluses of both coal tar and wood tar distillates. The results were decreased prices and a search for new fields for the use thereof. The chinch bug invasions of recent summers in states like Illinois and Iowa saw large quantities of these products employed as repellents to make possible the collection and destruction of great hordes of this pest. Such invasions are, of course, spasmodic and their use for this purpose cannot be depended upon as a stable one. It did result, however, in making the farmer more conscious toward the use of coal tar products and preparations made from them as plant insecticides. When he detected the odor of creosote for chinch bug control, he turned to his stock dip or cresol solution for use as plant insecticides. I know numerous inquiries came to us whether it was safe to spray the vegetable garden with stock spray emulsion during these control measure times.

Chemists are quite conversant with the use of coal tar distillates but some entomologists are confused as to the terms assigned to various coal tar fractions and extractions used for making coal tar disinfectants. It is in order, then, to briefly clarify the nomenclature of these raw materials which include creosote, cresol, cresylic acids, tar acids and tar acid oil.

The term "creosote" commonly refers to different compounds. Coal tar creosote is derived from coal tar in the process of making coke from coal. Wood creosote results from the destructive distillation of wood. Coal tar creosote is a thick liquid by-product generally containing phenols, cresols and xylenols but of indefinite composition. Wood creosote is quite distinct from coal tar creosote although both contain ingredients in common. Refined wood creosote results in a dark to colorless oily liquid, possessing a pungent, penetrating odor. Its complex composition includes among other products phenol and cresols to which may be attributed the preservative and antiseptic value of wood smoke. Beechwood creosote is more valued for certain purposes because of its higher content of cresols and guaiacol.

Cresol refers to the mixture of three isomeric cresols obtained from coal tar. The U. S. P. XI specification limits the distillation temperatures to between 195° C. and 205° C. and the density at 25° C. between 1.030 and 1.038. The term cresol is now pretty definitely understood to refer to a mixture having the U. S. P. characteristics.

Cresylic Acids refers to more indefinite mixtures of cresols and contains some phenol and xylenol. This compound usually contains 95 to 99 per cent total phenols.

Tar Acid Oil is the common designation given to distillates boiling above 210° C. and below the anthracene out of about 300° C. It contains phenol, cresols, xylenols. The percentage of these tar acids may vary from 10 per cent to 75 per cent in various tar acid oils. The naphthalene which distils off with the tar acids is removed by a process of chilling and whizzing the distillate. Tar acid oil, in addition to the tar acids, also referred to as phenols, contains tar bases, moisture and coal tar hydrocarbons. The percentage of phenol is generally kept below 5 per cent when used for making coal tar disinfectants in order to comply with the Federal Caustic Poisons Act.

* Presented at the mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1936.

There are three commonly known disinfectants made from coal tar distillates. They are Compound Solution of Cresol U. S. P., Cresylic Acid 50 per cent and Coal Tar Disinfectants, also called Stock Dip or Germicide, Dip and Disinfectant. Their method of manufacture is practically the same, all being saponated either with linseed oil soap, castor oil soap, or some other soap and in the case of stock dip usually with rosin soap. The U. S. P. Cresol Solution is used largely in the field of medicine; the Cresylic Acid Solution may be used as a 3 per cent solution as an approved dip and disinfectant for railroads and stock yards. It, furthermore, finds extensive use in tubercular eradication work in testing herds and some additional use for dressing wounds and cuts on animals. The so-called coal tar disinfectants or commonly-termed stock dips have a more ready acceptance among farmers because they are sold considerably cheaper than the other two products just mentioned. They find many other uses on the farm besides the common one of dipping sheep for scabies. Manufacturers recommend it for disinfection of hog and poultry houses, barns, privy vaults, cesspools and other farm buildings. It is also used for cleansing and disinfecting superficial wounds and cuts on animals, for superficial varieties of mange on cattle, hogs, horses and sheep, as well as delousing cows, horses and poultry. These uses are quite completely understood and are given merely to fix the common uses to which these preparations are put. It is interesting to note that at your last convention, J. C. Varley[1] presented a paper in which it was shown that disinfectants like these in a 20 to 1 water dilution were effective in killing disease producing organisms under practical conditions. He found that either the coal tar or the cresylic acids disinfectants are equally germicidal. These facts greatly aid in accrediting their use as general disinfectants in the home and the sick room.

In discussing the extended uses of these disinfectants, it is of interest to note that the consumers themselves often suggest uses not indicated or even sanctioned by the manufacturer. A number of such cases have come to my attention from time to time. In some cases the one, making the suggestion, is very insistent as to its effectiveness and insists it be included in the legend of the package, even though it may be rather amateurish. Some of the more common suggestions along this line are as additions to drinking water for stock, hogs and poultry to cure various bacterial diseases; as a fumigant in hog and poultry houses to kill mites; as an addition to white wash and cold water paints; and as a solution in which to soak grain to prevent birds from feeding on it after it has been sown. This last suggestion, I understand, is at this moment being studied at the University of Wisconsin. A manufacturer can hardly authenticate all these claims.

Certain uses, not generally advised, are peculiar to the warmer climates. It is used as a repellent to insects by painting and spraying it around places of their entry. Its disagreeable odor to humans is applied to insect life in this regard. For the same reason it is believed to keep away termites, though erroneously so. The destruction of books on open shelves by insects is prevented by painting them with a compound of stock dip and naphthalene. Uses of this kind are limited and of questionable value.

The most fertile field for increased consumption of cresylic acid solution and coal tar disinfectants of proper composition has been opened by economic entomologists. These are now being successfully used as dormant washes or sprays for fruit and ornamental trees. A rather sketchy review of some of the work in this regard, even though it is not directly in the usual scope of most disinfectant producers, should be of value. Those manufacturers who have constructively approached this use have derived considerable benefit in increased sales of their products in this field. By closer cooperation with orchardists in giving them a product which meets their specifications still greater amounts can be sold.

The work for controlling certain plant insects on fruit trees with coal tar products probably began in Germany. The Germans conducted their work with heavy coal tar distillates termed "carbolineum." The Dutch followed the Germans and about 1920, a Dutch manufacturer, H. van der Linden, introduced a tar acid oil spray under the name "Carbolineum Krimpen" into England. This product had previously met success as a spray for fruit trees in Holland. The product received an enthusiastic reception in England as is evidenced by the remark from Petherbridge and Weston that its introduction "brought about a big change in the routine spraying of orchards" and "was the most important addition to our knowledge of control of fruit pests that has been made for some time." In certain countries of Europe today these sprays have the same status as miscible oils and oil emulsions have in our country as fruit tree sprays.

The interest in tar oil washes abroad, their undoubted insecticidal value, their plentiful supply and cheapness have resulted in interest in investigating them in this country. Some of this work has been done by the tar acid oil producers and manufacturers of disinfectants. It is unfortunate that in certain cases the investigators did not have a more thorough knowledge of the composition of the products they used. This has led to some confusion in correlating the results. Direct correspondence with entomologists verifies this. Then too, there is some confusion in their use of the chemical terms applying to the compounds they employed. It is evident that manufacturers of cresylic acid compounds and coal tar disinfectants ought to cooperate more closely with the entomologists conducting the work. Certain investigators are concerned regarding the variation in the composition of tar acid oil products particularly and have already suggested standards as to tar acid content, freedom from naphthalene, and distillation temperatures.

As has already been stated, the two types of disinfect-

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[1] Soap, Vol. XII, No. 1.

Rotenone Determination

Observations on the Determination of Rotenone With a Suggested Method

By D. C. Beach*

S. B. Penick & Co.

SEVERAL crystallization methods for the determination of rotenone in derris and cube roots are in use today most of which are modifications of the Jones Method[1] originating from the Department of Agriculture in Washington. These methods depend basically upon the relative insolubility of rotenone in carbon tetrachloride and its ready crystallization from a concentrated solution thereof. The differences lie in the manner of the initial extraction of the resins from the root, some using carbon tetrachloride as in the original Jones method, others using trichlorethylene or chloroform.

Numerous workers have made exhaustive studies of these particular basic insecticidal materials, Cahn and Baum[2] having published valuable data, also F. Tattersfield[3] and others. Apparently each group that has studied the problem has adopted what appears to it to be the best procedure for accurate results. We find that the Department of Agriculture has changed its method of procedure several times since the Jones method was first published and these changes in the methods proposed by various workers have been designed to give both more thorough extraction and more complete crystallization.

The Jones method and some of its modifications, extract the root with carbon tetachloride in a Soxhlet with the extraction time varying from 6 to 48 hours. These long periods of boiling have a tendency toward lower results in our experience and while the question of just what happens is open, apparently some alteration takes place which retards or prevents complete crystallization of the solvate. It may be that this condition in no way impairs its toxicity but it is obvious that any factor that impedes the crystallization of rotenone to any degree, should be eliminated. The method published by Cahn & Baum specifies a different solvent for the Soxhlet extraction of the resins namely, trichlorethylene, while Rowaan[4] prefers digestion of the root with chloroform at room temperature, both, of course, using carbon tetrachloride for crystallization.

After considerable experimentation we have adopted chloroform as the extraction solvent. According to the work done by Jones and Smith[5] chloroform is the best solvent for rotenone, 73 grams dissolving in 100 cc. This solubility is much higher than that of the two next best solvents, namely, ethylene dichloride, which will take up 43 grams and trichlorethylene which dissolves 19 grams per 100 cc. of solvent.

Because of this high solubility of rotenone and the derris and cube resins in chloroform the sample does not need to be in a finely powdered condition as is sometimes specified, but may be of the order of a 20 mesh granulation which is entirely satisfactory and which naturally saves much time in preparing the sample for analysis. The root should be normally dry, however, and if such is not the case it should be carefully dried at room or moderate temperature before extraction. Oven drying at 100° C. is not advisable as Jones has shown that this treatment gives low results.

By the use of chloroform, then, it is possible to extract very efficiently and without the aid of heat any grade of root whether low test or high test. In some instances low test root has yielded, little, or no, rotenone by carbon tetrachloride extraction whereas with chloroform appreciable amounts have been obtained. In cases of high test derris or cube we find that chloroform readily extracts the rotenone content of the root and obviates the difficulty often experienced of extracting the last 1 or 2 per cent with carbon tetrachloride.

In some of the methods where a solvent other than carbon tetrachloride is used for extracting, the use of a naked flame is specified to make certain that the last traces of solvent have been removed from the resins. We feel that this is taking an unnecessary chance of overheating. Also some of the methods in use do not make allowance for the solubility of rotenone in carbon tetrachloride and while this error may not be great, it is one that can be easily overcome either by redissolving the resins in carbon tetrachloride which has previously been satuated with rotenone solvate or, if carbon tetrachloride has been used for extraction of the root, by adding a calculated amount of rotenone to the concentrated solution just before setting aside to crystallize.

In the matter of washing the crystals we use carbon tetrachloride which has previously been satuated with rotenone solvate at room temperature. A stock solution can be kept on hand and filtered for use as necessary.

Our method, which we believe has the advantage of consuming less time and being considerably more convenient than the others and of yielding somewhat higher results than most of the other methods may be outlined as

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* Presented at the mid-year meeting, Natl. Assn. Insecticide & Disinfectant Manufacturers, Chicago, June, 1936.

BUSINESS--
and the Washington Situation

By Charles P. McCormick*

McCormick & Company

IF we listen to the politicians in Washington and throughout the country, one would think there is little honor left in any business man or industrialist today. One would also think that they are making slaves of labor and are not at all interested in the welfare of our country. This is not the case. The exceptional crook does not make the industry crooked. It is not surprising, therefore, that the attitude of the "leading" politician of this country was non-committal regarding the meeting of the Chamber. It was held as usual at this time of the year in Washington and there were many interesting high spots that might be recited in spite of the "smear campaign" of business in general during the last few years.

In 1900, there were approximately 100 associations of national significance, while in 1936 we have roughly 1,500. The old method of operating a business under the unit system has given way, in a great measure, to combined co-operative trade industry units, and it is interesting to note from the Department of Commerce's figures that at least 20,000 people are employed in carrying out trade association work. Also that during our Nation's short life, we have advanced from the smallest nation to first place among the nations of the world in capital, in achievement, in progress, and in co-operation, yet the politicians strenuously strive to smear business, claiming that business men and industrialists are not public spirited citizens, but are selfish slave-drivers and not at all concerned about the public good. I want to pause here long enough to state that it is time for business to wake up and speak for itself,--go on record not in a defensive way but take the offensive. Passive submission can be misinterpreted as guilty conscience and cowardice.

These things do not just happen. Business men are more interested in the common good and prosperity of the country, as well as their own individual welfare, than any other type of men, and we, as association minded men should resent any further "smearing" of business through the press or elsewhere.

It will take business men to finally stop this crystal gazing into "Utopia" and other pink-whiskered domains, and get back to fundamental realism, such as living within our income and not taking from the efficient to provide for the "don't give a darn" man.

The American Trade Association, one of the subsidiaries or affiliates of the Chamber, made its constructive annual awards to various trade associations that had best formulated, promoted and interpreted business to the public and the government during 1936, as follows:

American Dry Milk Institute, American Institute of Steel Construction, Automobile Manufacturers Association, National Fertilizers Association, National Retail Dry Goods Association, Tanners Council of America, and U. S. Building and Loan League.

Awards were presented in recognition of accomplishments of the various associations and it might be noted by the National Association of Insecticide and Disinfectant Manufacturers that if we plan any work that we feel would be meritorious, we should submit our plan to the A. T. A. E. for consideration, for interchange of ideas among Association secretaries and presidents in the past has been helpful in building up this great country of ours.

To further more clear up the political "smear" that the Chamber does not represent a cross section of the average business life but is controlled by large monopolistic interests, I wish to assure you that such is not the case. In all discussions on the program—large, medium, small and very small, the manufacturing and distributing angles were covered splendidly by the Association, and the combined groups unquestionably reflect an accurate composite view of the general business situation over the country. Business, however, is not a unit on any single thing—it is not a political unit, and if there are internal disagreements, clashes or diverging viewpoints, it is merely because there are different-minded people and different-minded organizations. The Chamber's resolutions are complex problems generally and many of them must be straddled because of diverging viewpoints, but there was no indication at this meeting or others to straddle issues because of political or other viewpoints. It was not an indication of weakness. The prominent civic and industrial leaders on the program were considerably less in number than last year. Possibly they were more diplomatic and not quite as violent in their criticism of the new deal and its policies as last year, although it was generally accepted that practically the majority of those in attendance were not in sympathy with the new deal. However, there seemed to be less bitterness and a greater willingness to accept the situation that had been forced upon them. Many of them felt that the political game would be continued and that

* Report as National Councillor of the U. S. Chamber of Commerce to the mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1936.

they might as well accept it in the best possible spirit. It might be interesting to state, also, that they believe Mr. Roosevelt will be re-elected, contrary to their desire and think, that Mr. Landon will be nominated and that the Republican Party is asleep. While Mr. Roper made an excellent speech, it was the general belief that it did not reflect the views of the White House.

The most se..ous subject at the Chamber's meeting anu at subsequent large gatherings such as the National Association of Manufacturers and the Associated Grocery Manufacturers of America, was the question of "Unemployment" and "Labor Relations". While nothing could be offered immediately, a special committee was appointed to study the problem and offer its best suggestions. It was felt most decidedly that the best move for industry would be to do something about Unemployment and Labor Relations rather than allow the Government to continue to set up wild schemes.

It does seem that trade associations, business, and industrialists, must be prepared to look into the labor situation and work out for themselves a policy that will satisfy the Government that something is being done relative to unemployment, unsatisfactory hours, unsatisfactory wages, etc., and thereby prevent pending legislation from becoming law. While it is a controversial question, I be'_ve it is one that industrialists must take seriously. The question of strikes and future relations of employer and employee must be straightened out better than today, otherwise we shall have more trade unions in business, more unconstitutional rules to govern business, and increasingly higher taxes. We must meet the situation frankly, honestly and fairly. Many employers are not fair today but the majority are I believe.

Let each one give more thought toward proper relations between yourselves and your employees and if you do, it will be in keeping with what the other trade associations are doing and it will be money well spent. Will gladly give you the proper leads towards attaining this information if you desire individually.

The different weeks fostered by the respective trade associations are nothing new, but in order to place them on record and with the view possibly of our doing something in the distant future, I call your attention to the following national weeks:

National Retail Grocers Week	National Baseball Week
Better Floors Week	Fishermen's Week
Better Homes Week	Baby Week
Egg Week	Golf Week
Raisin Week	Music Week
Life Insurance Week	Foreign Trade Week
Ice Refrigeration Week	Tennis Week
Tomato Week	Swim-for-Health Week

In conclusion may I say, without wishing to carry tales but simply to submit for your consideration the fact that another minor and very small association is being formed by a group of this membership, with the idea of having its own secretary and devoting its time to studying a restricted part of this industry. I am of the opinion that a trade group is stronger by having one head organization and letting the subsidiary bodies, so to speak, operate confidentially and exclusively under the parent body. I do not feel that a separate organization should be formed at this time for many reasons, but think the Board of Governors of this Association should meet in conference with the newly proposed trade association, see if their aims cannot be unified, and their demands met to make us stronger instead of weaker.

One may wonder what this has to do with the National Councillor's report, but it has generally been conceded that the larger the Association, the broader in scope is its policies, and the more activities it has, the more it will be recognized and the better results it could give its members. I simply mention this for the benefit of this gathering so that you may find ways of enlarging the scope of the Association to make way for increasing necessary activities for the different types of membership, for without progress and change we cannot look for a greater and better trade association.

Rotenone Determination

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follows: Shake 30 grams of powdered or granulated derris or cube root with 300 cc. of chloroform in a tightly stoppered 500 cc. Erlenmeyer flask at room temperature for two or three hours on a mechanical shaker. Let stand over night and then shake one hour more.

Chill flask and contents, especially in warm weather, and filter rapidly into a suitable flask observing precautions to avoid loss from evaporation. Stopper flask and adjust temperature of filtrate to the temperature of the original chloroform used, by immersing in a water bath. Measure accurately 200 cc. of the filtrate, representing 20 grams of root, and transfer to a 500 cc. Erlenmeyer flask. Distill the solvent to about 10-15 cc. on an electric hot plate and completely remove the remainder on the steam bath with the aid of a vacuum pump.

Dissolve the resins in about 10-15 cc. of hot carbon tetrachloride and again, in a similar manner, completely remove all solvent. Repeat with another 10 cc. portion of hot carbon tetrachloride which effectively removes all traces of chloroform from the resins. The chloroform extract is, as a rule, completely soluble in carbon tetrachloride but, if any insoluble residue should remain when the extract is dissolved in the first portion of carbon tetrachloride, it should be filtered off and thoroughly washed with further portions of hot solvent, after which the filtered solution plus washings is evaporated and treated as above for the removal of all chloroform.

The resins are then dissolved by means of gentle heat in approximately 15 to 20 cc. of carbon tetrachloride previously saturated with rotenone solvate at refrigerator temperature. If the amount of resin obtained is low, a

somewhat lesser volume of saturated carbon tetrachloride solution should be used. The solution is then cooled and placed in an ice water bath, and frequently rotated until crystallization has started. This is usually accomplished without any seeding and proceeds rapidly. The flask and crystals are then set aside in the refrigerator over night. After standing again in ice water for about thirty minutes the crystals are quickly transferred to a tared gooch crucible fitted with an asbestos pad, filtered by an aid of vacuum and washed with small portions (3 cc.-5 cc.) of carbon tetrachloride previously saturated with rotenone solvate at room temperature until the washings are nearly colorless or similar in color to the saturated solution. Continue the vacuum for 15-20 minutes to remove as much carbon tetrachloride as possible. Weigh. Warm gooch and contents slightly for a few minutes (not over 50° C.), apply vacuum again for about 10 minutes or until crucible is cool and weigh again. If necessary repeat the operation a second or third time until constant weight is obtained. The weight of solvate crystals multiplied by 71.9 and divided by 20 will give the per cent of rotenone present.

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DIPS AND DISINFECTANTS

(*From Page* 106)

left unharmed and, in fact, freedom from external parasites increases its value.

In the warfare against animal disease, dips and disinfectants are thus particularly important because they are effective weapons of offense.

I am impelled at this point to express for myself and on behalf of the Bureau which I represent appreciation of the excellent and effective cooperation you have given us through the production of the uniformly reliable products which have been such an indispensable aid in the discharge of our functions. Congress empowered the Bureau of Animal Industry to take appropriate measures against animal diseases. One of the essential measures was the disinfection of infected cars, yards, and premises, and, in the case of certain diseases, de-infestation of animals by dipping. Accordingly, we formulated a rather rigid set of specifications for each type of dip or disinfectant that should be permitted for official use. Our chemists, in drawing the specifications, endeavored to meet or anticipate the exigencies involved in the undertaking. I know that some of their demands were a little difficult for you to meet at first, but I also know how you uncomplainingly tackled them. If at this hour a sample from every container or every brand of permitted dip and disinfectant now on the market could be rushed to our laboratories, I believe that very few would be found to fail to meet our specifications in any particular.

We are sometimes asked why we are so conservative in the types of dips and disinfectants we permit, why we do not more quickly take advantage of modern scientific discoveries. We are admittedly conservative in the application of a new discovery, until its merits are well established. The musket could not replace the archer's bow until it had proved itself to be an equally dependable weapon under all the vicissitudes of warfare in the field and until a sufficient number of men had been thoroughly trained in its use. Most new formulas for dips and disinfectants have not been thoroughly tested out for effectiveness and dependability under the actual field conditions our men must encounter. Further, our men are thoroughly trained in the use of the old weapons, which do get results, and we hesitate to risk a period of uncertain effectiveness while they become familiar with a new one. But there is extensive guerilla warfare always in progress, especially against diseases or infestations in opposition to which the forces of constituted authority have not yet been extensively marshalled. Here is an appropriate proving ground for new products. The ox warble is an example. Fully satisfactory agents to repel the fly about to deposit eggs on the cattle, or to destroy the viability of egg or grub, would be warmly welcomed. This, of course, is merely one of scores of similar problems.

The development of new chemical products and methods may at times appear to be rather slow. This impression is no doubt the result of the painstaking character of research and partly because the tempo of modern life is so rapid in other respects. One measure of noting the progress in the field under discussion is found in Department publications which contain official recommendations concerning dips, disinfectants and insecticides. Our publications on these subjects normally come up for reprinting every six months or year and generally there is need for making new recommendations. Thus we may properly consider that besides being highly effective and useful, this field of research and industry has been and continues to be actively progressive.

To prepare a liquid metal polish which can also be used for cleaning windows and mirrors, dissolve 5 parts of curd soap in 50 parts of boiling water. This would set to a jelly by itself on cooling. Disperse in the hot soap solution 5 parts of olein distillate and 20 parts of finely ground chalk and saponify with 3 parts of 25 per cent ammonia (sp. gr. 0.91). After the temperature has fallen to about 60° C. (140° F.), stir in 17 parts of denatured alcohol. This keeps the mixture liquid. *Seifensieder-Ztg.* **63,** 377 (1936).

The Public Health

By Dr. Herman N. Bundersen*

President, Chicago Board of Health

THE tremendous strides in the promotion of public health and prevention of premature death have been largely due to the safeguarding of mankind's environment. Formerly, large numbers of deaths occurred from preventable diseases, which are now almost unknown in civilized countries. Water supplies have been made safe for drinking, by disinfection and allied treatments. Milk has been safeguarded by pasteurization. The use of disinfectants has greatly decreased the hazards of spreading communicable diseases in hospitals and elsewhere. Insect-borne diseases have been very largely controlled by the efficient and widespread use of insecticides.

This modern trend dates from the discoveries of Louis Pasteur, and, for the most part, the improvement has been made within the last fifty years, since there was a certain lapse of time between the original discoveries of Pasteur and his followers, and the subsequent practical application of their work.

A great boon is conferred upon mankind through the products which you manufacture. Large cities such as ours would be virtually impossible to maintain for any length of time, were it not for the use of safeguards to health, which your industry creates and makes readily available throughout the land. The research work which you and others are constantly doing to improve disinfectants and insecticides promises a still greater measure of protection for the future, and health authorities should recognize the importance of such studies.

In the city of Chicago we have had an excellent example of the value of disinfection in our experience with typhoid fever. A generation ago that disease was one of our big problems. Epidemics of the disease visited the city repeatedly. Prior to that time these calamities were occasioned principally by the fact that we were drinking water containing sewage. Today we have one of the lowest typhoid-fever death rates of any large city in the world. In recent years we have had fewer deaths from this cause during the entire year than we had in a single day during some epidemics of an earlier period. This tremendous revolution has been due to the improvement in our drinking water, which in turn was caused by the exclusion of most of our sewage from the lake and by the disinfection of the water supply by chlorination.

At the present time, the city of Chicago is conducting an extensive warfare against rats. This effort has a three-fold purpose: First, to ward off diseases which may be spread by rats, particularly bubonic plague, which is present among rodents in the west and may be introduced into Chicago at some future time; Second, to avoid the huge economic loss attributed to rats, and third, to give employment.

A force, averaging five hundred and forty men, has been supplied by the Works Progress Administration to the Chicago Board of Health for our Municipal Rat Extermination campaign. Some of these men are used to educate the public—to recognize that the rat is not a necessary evil and need not be tolerated. This work is done with the hope that, when the need of employment relief has passed and the project terminates, our citizens will continue the warfare against the rat, using the effective measures demonstrated in this campaign. If this objective is reached, it should be reflected in a permanently increased market for raticides, such as Red Squill, Barium carbonate, etc. Some of the other men assigned to this project are distributing poisonous bait, particularly in those neighborhoods where the residents are not financially, in a position to purchase the materials themselves. Letters, which have come to me from people in the areas where this work has been carried out, praise the effectiveness of the campaign and urge its continuance, and intensification.

Considerable apprehension was felt at the beginning that this official project for the extermination of rats might interfere seriously, with the business of private exterminators. These fears have not materialized, and it is my belief that the business, not only of you manufacturers but of the men who are doing the exterminating, and using your products, will benefit by the practical demonstrations and the education being afforded to our citizens through this public work.

Success in disinfecting and in getting rid of insects and rodents, depends greatly upon the quality of materials used, and the safeguarding of the public health to a degree, rests upon the integrity and fair-dealing of the members of this association. It is gratifying to the public health authorities, that there is available, at reasonable prices, a supply of disinfectants and insecticides, in which the public may have confidence as to their strength and efficacy. In supplying such materials, you men are the partners of the public health officials, practicing physicians, sanitary engineers, nurses, and all others who are devoting their lives to the prevention of sickness and making life more worthwhile and longer too. We value your cooperation, and trust that, as time goes on, members of your industry and the public health profession, will work more and more effectively together, toward the goal of giving our people, lives that are free from the illnesses, nuisances and discomforts, which should belong only to a generation that has passed.

* Address before the annual mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1936. Read by D. E. Duffy, Chief, Division of Community Sanitation, Chicago.

Trade Association, or Washington?

By Ray Schlotterer*

YOU all know the fable of the three blind men who came upon an elephant and attempted to describe it to each other. One got hold of the tail and he said that it must be a rope. Another, smaller in stature, felt the leg and said that it was surely a tree. The third grabbed the long ivory tusks, and was sure that they had found a spear. Each "saw" the object from his own point of view, his own experience, and the inevitable quarrel ensued. As it became more heated, it advanced further and further from reality.

Many of us are in the same position when we begin to analyze and explain more complex living organisms, such as industry, government, capitalism, fascism; yes, and even the New Deal! We are all as blind men, rarely understanding our relationship to a large and complex economic machine. When confronted with a mass of conflicting facts, we are often led up dark winding alleys, and sometimes draw hasty conclusions. It is then natural, realizing our own inaptitude, that we call on someone else to help us out of the alley.

So some people go to church, some business men cry out to their trade associations, while others ride sleepers to Albany, Springfield or Washington. And now the time has come when government is the great hope of the suffering and the weak. This is true of the unemployed, the dirt farmer, the independent retailer, and last but not least, the business executive.

The head of the family without a job, demands P.W.A.; the dirt farmer struggling to meet the interest on his mortgage requests A.A.A.; the independent retailer, harassed with price competition, calls on F.T.C.; and business requiring loans calls on R.F.C.

This chorus is further joined by leaders in the consumer protective movement, who believe that government should also step in and control through strait-jacket laws the production and distribution of all goods and services—nearly everything the public eats, drinks, or wears. During these days of economic upheavals these elements seem to make strange bedfellows, but this combination is in the same category of the citizen who in one breath damns government regulation and control, and in the next requests its aid and assistance.

Possibly we are only witnessing a swing of the pendulum, from right to left, from conservatism to liberalism or radicalism. Possibly the situation is temporary, a mere moment in the span of time. But it might be here to stay. No one can tell! We are, however, living in an age when emphasis is placed on the social theory of government. J. Q. Citizen is demanding that his government do more things, shoulder more responsibilities, carry on more enterprises than at any time in its history. These changes have not been the result of one political party or another. The depression was not Republican, neither is recovery due to the Democrats.

You were driven to the capitol on the Potomac during the halcyon days of the N.R.A., and you will continue to go there if you believe that is the avenue by which you can solve the vexing problems of your daily business life. This is a natural course, the line of least resistance as you find yourself against a stone wall from the legal angle when you attempt voluntarily and cooperatively to deal with existing business conditions. You despair of these methods, abandon self-regulation, and turn to Washington for aid. Is it wise through governmental dams and dikes to check and control the free flow of the stream of distribution and competition, handicapping in some cases, the more successful merchandiser, while holding an umbrella of protection over others? In your move to curtail competition, are you not setting up a chain of checks and balances which will act as a boomerang and limit your own freedom of movement? From the N.R.A., and the systems now operating in Europe, we have seen that controls of production, and of prices, if they are to be imposed by government, automatically mean stringent regulation and supervision by governmental agencies.

As a result of various groups demanding the assistance of government, we have been living through a period where a mere demand on the part of a "congressional whip" could immediately assure the passage of any legislation. It is only necessary to go back over the past four years and note the huge avalanche of legislation enacted, often violently opposed by industry. Your representatives have been so unalterably one-sided, that they were often responsive to political pressure, wielded to aid and abet vociferous minorities, rather than being awake to public opinion, and general welfare. As a consequence, your plans were twisted by legislators, with the result that as the tension was applied, government and industry have dug in for trench warfare, each refusing to give an inch. Following Grant's advice, business has "ganged-up" and is ready to fight it out on that line if it takes all Winter. Government, in many cases, has assumed the role of a "G" man in tracking down a public enemy, and all too frequently ignores the advice of its more sage counsellors. Today, intrenched business and intrenched predatory wealth are battling intrenched government and intrenched radicalism.

In any democracy, the two party form of government is paramount. There must not be an overbalance of

* Before 23rd mid-year meeting, National Assn. of Insecticide and Disinfectant Mfrs., Chicago, June, 1936.

power. A powerful minority always keeps the majority in line. It prevents carelessness, overconfidence, laziness, arrogance and indifference. An ideal democracy is one where the balance between those who are in, and those who are out, the majority and minority, is so evenly divided, that both sides must keep in close touch with public demands and opinion, or else there will be a change in power. This ideal is often impossible to attain in practice.

Gentlemen, nothing can be gained by calling political representatives names or throwing mud at bureaucrats. Business has discovered over the past few years, with the increase of government regulation, that it has the right to call the shots, it can prescribe the size of the bullets to use, and the type of rifle necessary. Experience with political officials, whether they be politicians or bureaucrats, has not been favorable. Business men have been lax in choosing the type of man who enacts the laws, and indifferent to the ones administering them. Why expect future success along the same avenue of approach? We need government to aid and assist industry. It can help to chart the course, post danger signals, and generally aid navigation, but if you are still going to be the captain of your business enterprise, it will not be possible through more legislation.

There are only two alternatives—either self-regulation through trade associations in accordance with rules that conform to law; or government regulation of business. For this reason in any plan of self-regulation the trade association for that industry becomes the focal point from which new developments must occur. Business cannot become set in the present turmoil, neither can trade associations. They must grow and develop, and above all, find their own salvation. For this reason, the recent sponsorship by the Proprietary Association of an Advertising Advisory Board to bring about truth in the printed word, and in illustrations, is a move in the right direction. This recognizes the necessity for protecting the public first because only by so doing can it protect manufacturers from unwise, or short-sighted action, which may reflect discredit upon the entire industry.

At a recent meeting of the Toilet Goods Association, a similar plan was proposed, which included a Bureau of Standards, working in conjunction with federal agencies, which would study and suggest improvements or corrections in labels, packing, advertising and manufacturing raw materials, employed by the cosmetic industry. Note that in both these cases, this movement has been sponsored by a trade association who has realized its duty to the consuming public. It is the only method to avoid future attacks with possible governmental interference. These necessary demands made for business reforms are brought about voluntarily and in a less painful manner, than if imposed forcibly from the outside.

What can a trade association do, for instance, to eliminate price competition? We have recently had a very interesting decision by the Supreme Court in the so-called Sugar Institute Case. The legal representative for the Sugar Institute stated that under existing economic conditions, particularly in highly competitive industries, there frequently develops destructive methods of competition which are highly injurious to the public and to private interests. He further stated that single individuals and companies cannot abandon such practices unless their competitors abandon them, and that therefore a joint effort on the part of the whole industry was essential. This argument by a trade association attorney was the identical one used by the government when it set up the N.R.A. codes. But in this particular case it was offered to show the legality of the open price system, used by the Sugar industry. It is of interest to note the similarity of the approach. However, in this decision the legal limitations for private action by a trade association were set forth. The Supreme Court found nothing illegal in the open announcement of prices and terms but rather it looked with concern upon "the steps taken to secure adherence without deviation to prices and terms thus announced". It was "concerted undertaking" to obtain such adherence which violated the Anti-Trust Laws. The Sherman Law as the Court described it remained a "charter of freedom" permitting wholly voluntary action to end abuses in industry, but it did not sanction methods which "unreasonably" restrained competition.

Instead of giving the Federal Trade Commission more power to prevent monopoly and restrain trade which has been proposed in recent legislation, we should call upon its aid and assistance for approval of any plans which industry seems fit to place in operation. The Federal Trade Commission should be given legislative authority not only to act as a prosecutor and judge but to be an advisory body in a somewhat judiciary capacity to industry generally. We would then have the situation where the commission would be developed to its full possibilities which no doubt it was supposed to have had when it was originally inaugurated. The great majority of business executives are law abiding and if they knew in advance that the policy proposed by their trade association was given a blanket authority of approval through the informal advice of a government official, then we should be far along the road of industrial self-regulation.

This case should encourage an industry through its trade association to solve its problems by voluntary efforts. Industry must realize that we are in unusual days. It must trim sails accordingly to meet the changing conditions of tide, wind and weather. It has done this to meet intense competition from the standpoint of distribution. It has given extensive study and research to obtain consumer appeal and demand, often changing overnight a complex business procedure. Consumer requirements were attentively listened to and from a nation of the "public be damned", we grew into a nation of the "public be pleased". We have just realized that this

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INSECTICIDE STANDARDS

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employ a member of the Association, *not in the insecticide business*, but who has the facilities to blend, filter and pack to handle these standard control insecticide packages.

Accompanying each package of the Official Standard Control Insecticide the following enclosure will be used:

Method of Use of Standard Insecticide in Testing: Follow the procedure in accordance with the current official Peet-Grady Method. In using the Standard Control Insecticide the Standard is to be compared directly with not more than 3 unknowns, in a series, in the order —Standard, Unknown No. 1, Unknown No. 2, Unknown No. 3, and repeated in the same order. This means that at least 25 per cent of each batch of flies must be subjected to the Standard.

This committee recommends that further work be done on detailed plans and specifications of the Peet-Grady chamber and the method of test.

USES COAL-TAR DISINFECTANTS

(*From Page* 108)

ants adaptable to fruit tree spraying are cresylic acid solution and stock dips.

Dr. Ginsburg of the N. J. Agricultural Experiment Station has been working mainly with colloidal cresylic acids. He has shown that these acids when saponated with 10 per cent to 20 per cent of soap are valuable, compatible additions to dormant sprays of the Bordeaux and lime-sulfur type. This combined insecticide-fungicide mixture containing about 0.5 per cent of cresylic acids is considered by him as practical to control scale, aphis, red mite and fungous diseases of apple trees[1].

R. H. Hurt of the Virginia Agricultural Experiment Station and F. Z. Hartzell of the New York Station are numbered among the leading investigators concerning the value of preparations so very close to stock dips that these are being used by growers as fruit tree sprays because they are readily available. Sprays are made directly from these disinfectants at the rate of 1½ to 3 gallons of dip to 100 gallons of water for the control of rosy aphid, oyster shell scale and light infestations of San Jose scale. Due precaution is necessary in applying these sprays to winter weakened trees. In New York State mimeographed bulletins are available to orchardists interested in them. Their action as fungicides has not been fully established but Hurt thinks there is evidence "to indicate that tar oil creosotes have some value in the control of bacterial shot-hole disease of peaches". For peach leaf curl, on the other hand, Hurt is of the opinion that the value of creosote emulsion is not established. According to users which have reported to us apple scab is remedied also.

Foreign investigations along these lines have not lagged in recent years. Beran and Watzyl[1] tested thirteen different carbolineums, resembling coal tar disinfectants on meal worms, grain weevils and scale insects. They found that when used as contact insecticides their insecticidal action depended upon the content of high boiling acids, especially those boiling over 270° C. These high boiling tar acids were furthermore the least injurious to fruit tree leaves and plum leaf buds. W. Speyer[2] found that while the codling moth, apple blossom weevil, caspids and other pests were resistant up to 5 per cent of these emulsions, the eggs of certain mites and spiders were destroyed. He also found that while the insecticidal action is not dependent upon the stability of the emulsions they serve to prevent plant injury.

In our own organization we have been successfully conducting field experiments with straight stock dip as sprays for a number of seasons in various parts of the country. Our product which contains about 25 per cent tar acids and less than 4 per cent of phenol and is saponated with rosin soap, has given general satisfaction when used as an addition to lime-sulfur or lead arsenate and when used directly as a dormant spray for apple trees. It repeats satisfactorily after the orchardist is properly instructed in its use and no tree injury has been experienced. We receive reports that it also aids as a spreader in applying the usual sprays.

In this regard the general reaction of growers toward the use of stock dip is in the last analysis of greatest importance. The Missouri Ruralist in a very recent number[3] summarizes the answers to a questionnaire sent to 17 Michigan fruit growers in 12 prominent fruit-growing districts of that state. To the question, "How does stock dip mix with other spray materials?" 15 out of the 17 were favorable for lead arsenate mixtures and 14 for lime-sulfur. All 4 who had used it with Bordeaux mixture reported "good". Ten said it controlled green aphis and 11 stated it helped with codling moth control. Other pests reported favorably on included pear psylla, berry moth, grape leafhopper and rose chafer. Some of these were probably not accurate but this overestimation of results shows enthusiastic reception by these users.

This comparatively new use of coal tar disinfectants, then, is already more or less established. It does seem constructive, as a constructive suggestion, that inasmuch as members of the Association are interested in the manufacture of these items closer cooperation might well be established with the investigators in this field and standards be established to meet the specifications they desire for this type spray material.

[1] Journ. Econ. Ent., Vol. 26, No. 3, p. 566.

[1] Z. Angew. Entomol 20, 382-414 (1934).
[2] Z. Angew. Entomol 20, 564-89 (1934).
[3] Missouri Ruralist, Apr. 8, 1936, p. 13.

An improved insecticide is substantially anhydrous and contains pyrethrins and pure rotenone dissolved in kerosene plus a minor proportion of other solvent such as 1 per cent of chloroform. Stanco, Inc. Canadian Patent No. 356,975.

Cattle Spray Tests

COMMENTING on a discussion of cattle spray tests by A. E. Doty in the April, 1936, issue of SOAP, a communication has been received from the Agricultural Experiment Station at the University of Delaware, signed by L. A. Stearns, entomologist, and approved by T. F. Manns, acting director. Enclosed with the letter is a reply to Mr. Doty's article by A. M. Pearson. Both follow:

"In an article entitled "Cattle Spray Tests," which appeared on pages 97-103 in the April, 1936 issue of SOAP, Mr. A. E. Doty of Rohm & Haas Company, Bristol, Pa., discusses certain data taken from University of Delaware, Agricultural Experiment Station Bulletin No. 196, by A. M. Pearson. Mr. Doty's selection of material from this bulletin was most unfortunate since his discussion tends to question the reliability of results published by Mr. Pearson.

The information included in this bulletin was secured under a fellowship of the Crop Protection Institute, supported on funds supplied by the Hercules Powder Company, of Wilmington, Delaware. Mr. A. M. Pearson, who was the investigator under this fellowship, carried on his work in this Department under my supervision as Chairman of the Institute Supervisory Committee on this project.

Mr. Doty's paper, which referred largely to the publication in question, has been carefully examined by Acting Director, Dr. T. F. Manns, of this Station and myself, and by certain representatives of the Company which supported this fellowship. Sometime ago we wrote to Rohm & Haas Company suggesting that in fairness to Mr. Pearson and his findings, it would seem that Mr. Doty should prepare a statement rectifying the errors in his paper and publish the same in SOAP. They apparently are unwilling to provide such a statement.

We have, therefore, requested Mr. Pearson to prepare a statement in reply to Mr. Doty's article on Cattle Spray Tests. This is inclosed herewith and we are also forwarding under separate cover at this time a marked copy of Bulletin No. 196 in order that you may see the points at which the selection of Mr. Doty's material is inaccurate. The statement prepared by Mr. Pearson is brief and covers the point in question in a satisfactory manner insofar as we are concerned. We hope that you will be able to publish this statement in an early issue of SOAP to correct the impressions that may have been made by the article by Mr. Doty in the April issue."

A Statement in Reply to Mr. A. E. Doty's Article on Cattle Spray Tests

By A. M. Pearson

IN the April, 1936, issue of SOAP there appeared an article entitled, "Cattle Spray Tests," by Mr. A. E. Doty, of Rohm and Haas Company. A study of this article reveals that exception was taken to certain data presented in University of Delaware Agricultural Experiment Station Bulletin No. 196 (1935).

Mr. Doty states in part as follows (page 97):

"A survey of this paper (Univ. Del. Agri. Exp. Sta. Bul. No. 196) reveals that certain of the results given therein are decidedly at variance, not only with our findings obtained after years of experimentation but also with the findings of other investigators who have also used the materials tested by Pearson.

The standard 'Peet-Grady' method 2-3, was employed for the toxicity tests, modified by the use of paper on the floor. Pearson's tests would indicate that a straight pyrethrum spray, using the equivalent of ½ lb. pyrethrum per gallon of No. 40 viscosity base oil, gives a *higher* kill in 24 hours than 1 lb. of pyrethrum in the same oil. In 72 hours the kill was practically the same as the 1 lb. spray. Using ¾ lb. pyrethrum per gallon, greater kills were obtained in 24 and 72 hours than with 1 lb. pyrethrum per gallon. Using a 2 per cent aliphatic thiocyanate *4 spray, he obtained a 4.9 per cent kill in 24 hours and with 3 per cent aliphatic thiocyanate, a 24.4 per cent kill. All these tests are considerably lower than are normally found by other investigators."

Table 1 (page 101) compares Rohm & Haas' with Pearson's Peet-Grady results.

In the opinion of the author of University of Delaware Agricultural Experiment Station Bulletin No. 196, Mr. Doty has presented these data from this Bulletin in an extremely misleading manner. This statement is based upon the following information taken from the publication in question and which was readily available to Mr. Doty, but was disregarded entirely in his article:

Bulletin No. 196, page 8: "During the summer of 1934, fly breeding in the laboratory was suspended, and the *new* culture started in the fall of that year proved to be considerably less resistant to the insecticides under investigation. Five-day-old flies were used during the spring of 1934 and three-day-old flies in all later tests."

Bulletin No. 196, pages 17-18: "The tests with the ¼ and 1 pound concentrations of pyrethrum were conducted during the spring of 1934 and the remaining tests in the fall of that year. Due to variation in fly resist-

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ance, *the results with the different concentrations of pyrethrum cannot be compared directly*, but tests in any one of the series should be, and are, in a logical relationship to each other."

Bulletin No. 196, page 18: "A series of paired tests was then conducted in order to obtain relative values for the four concentrations of pyrethrum alone. A summary of this series is given in *Table* 10, and the mortality curve for these data is presented in *Figure* 8, *Curve B*."

For comparative purposes, the data in Table 10 is the information which Mr. Doty should have used in his discussion. The per cent dead in 24 hours with ¼ lb. pyrethrum was 10.9; with ½ lb., 15.9; with ¾ lb., 24.1; with 1 lb., 37.7. Instead, however, Mr. Doty selected data for direct comparison which were obtained from different strains of flies, of different ages, and at different seasons of the year, and then offers such data as a basis for this criticism:

"A survey of this paper (Univ. Del. Agri. Exp. Sta. Bul. No. 196) reveals that certain of the results given therein are decidedly at variance . . . "

TRADE ASS'N OR WASHINGTON?

(*From Page* 115)

same change is demanded in consumer requirements when we are confronted with a new economic and political philosophy;—a new social theory of government.

If we are going to demand relief, this means everyone—the harassed retailer or the dirt farmer—we must expect new taxes. Increasing debt leads to one conclusion and the alternative to a social theory of government is State control. Rugged individualism might have been a product of the past, but individual aggressiveness and the intelligent application of one's ability to the problems at hand are the only solution to the national difficulties which we face. The nation is large, the individual small, but by his own initiative he can literally move the nation.

INSECTICIDE-DISINFECTANT MEETING

(*From Page* 93)

L. G. Smith—Merck & Co.
L. D. Benedict—Midway Chemical Co.
H. E. Bruner—Monsanto Chemical Co.
Thornton C. Jesdale—Monsanto Chemical Co.
M. V. Pennal—Monsanto Chemical Co.
F. D. Smith—Monsanto Chemical Co.
R. E. Sturhahn—Monsanto Chemical Co.
R. C. Whitman—Monsanto Chemical Co.
Edgar A. Murray—Edgar A. Murray Co.
C. P. McCormick—McCormick & Co.
A. E. Badertscher—McCormick & Co.
John N. Curlett—McCormick & Co.
Luke W. Foster—McLaughlin-Gormley-King Co.
Chester T. Hogh—McLaughlin-Gormley-King Co.
J. E. Murray—McLaughlin-Gormley-King Co.
J. H. DeLacy—National Can Co.
E. D. Murphy—National Can Co.
R. S. Solinsky—National Can Co.
E. C. Kratsch—National Sanitary Supply Assn.
William J. Weed—Niagara Alkali Co.
K. J. Fanshin—Oil, Paint & Drug Reporter
C. H. Heydon—Oil, Paint & Drug Reporter
C. M. Roper—Owens-Illinois Glass Co.
A. Lloyd Taylor—Pease Laboratories, Inc.
S. B. Penick—S. B. Penick & Co.
D. C. Beach—S. B. Penick & Co.
C. M. Black—S. B. Penick & Co.
Thomas Lewis—S. B. Penick & Co.
Harold Meyer—S. B. Penick & Co.
T. Olson—S. B. Penick & Co.
John Powell—John Powell & Co.
H. J. Ahles—John Powell & Co.
David W. Lynch—John Powell & Co.
Alfred Weed—John Powell & Co.
R. J. Prentiss—R. J. Prentiss & Co., Inc.
A. W. Bevernich—R. J. Prentiss & Co., Inc.
R. B. Stoddard—R. J. Prentiss & Co., Inc.
H. E. Whitmire—R. J. Prentiss & Co., Inc.

William J. Dunnican—Reilly Tar & Chem. Corp.
William Higburg—Reilly Tar & Chem. Corp.
J. F. Tildsley, Jr.—Reilly Tar & Chem. Corp.
J. H. Mueller—Research Laboratories
A. G. Kampmeier—Research Laboratories
J. E. Armstrong—Rex Research Corp.
O. F. Hedenburg—Rex Research Corp.
E. H. Rude—Rex Research Corp.
W. B. Eddy—Rochester Germicide Co.
John L. Lamprey—Rochester Germicide Co.
D. F. Murphy—Rohm & Haas, Inc.

James W. Laurie—Joseph Schlitz Brew. Co.
Simon S. Selig—The Selig Co.
Hugh R. Berry—Shell Petroleum Co.
Julius Loffredo—Sherwood Petroleum Co.
William F. Kroneman—Sherwood Petroleum Co.
William E. Bohlen—Sinclair Refining Co.
N. J. Gothard—Sinclair Refining Co.
R. G. Grady—Sinclair Refining Co.
F. O. Huckins—Sinclair Refining Co.
Burton G. Philbrick—Skinner & Sherman, Inc.
Grant A. Dorland—"SOAP"
Ira P. MacNair—"SOAP"
Thomas Morgan—"SOAP"
Edgar E. Brand—L. Sonneborn Sons
John C. Wolke—L. Sonneborn Sons
Franklin C. Nelson—Stanco, Inc.
W. J. Zick—Stanco, Inc.
E. H. Hillman—Standard Oil Co.
James A. Green—Standard Oil Co., Indiana
R. O. Cowin—Standard Oil Co., Ohio

William J. Wagner—The Tanglefoot Co.

V. W. Mider—U. S. Chemical Co.

A. L. van Ameringen—van Ameringen-Haebler
Paul W. Milbrat—van Ameringen-Haebler
William F. Pollnow—Vestal Chemical Co.

M. L. Magee—T. F. Washburn Co.
J. W. Trecker—T. F. Washburn Co.
Ralph G. Boalt—The J. R. Watkins Co.
E. G. Thomssen—The J. R. Watkins Co.
Ralph O. Jackson—West Disinfecting Co.
R. H. Labbitt—West Disinfecting Co.
Robert C. White—Robert C. White Co.
Robert C. White, Jr.—Robert C. White Co.
H. W. Hamilton—The White Tar Co.
G. A. Altenbern—Wizard, Inc.
John H. Wright—New York

T. C. Allen—Racine, Wisc.
E. A. Back—U. S. Dept. of Agriculture
F. L. Campbell—U. S. Dept. of Agriculture
J. R. Mohler—U. S. Dept. of Agriculture
C. C. McDonnell—U. S. Dept. of Agriculture
R. C. Roark—U. S. Dept. of Agriculture
Fred G. Smith—U. S. Dept. of Agriculture

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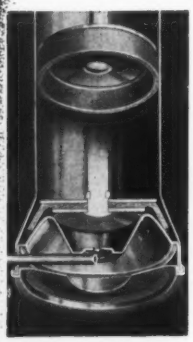

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Rotenone Determination

THE following method is for the quantitative determination of rotenone in almost colorless liquid insecticides, such as those which contain rotenone and aliphatic thiocyanates. If the insecticide base is a refined kerosene, an amount of refined kerosene equal to the amount of liquid insecticides used in the test must be added to the standards.

To 10 cc. of a chloroform solution containing from 0.05 to 2.5 mg. of rotenone per cc. in a glass-stoppered cylinder, add 10 cc. of a chloroform solution of thymol containing 10 grams of thymol in 100 cc. of chloroform. Add 2 cc. of a reagent made by adding 2.5 cc. of 3 per cent hydrogen peroxide to 100 cc. of concentrated hydrochloric acid. Shake for 1 minute, loosen the glass stopper and expose the cylinder to the intense radiation of a quartz mercury vapor lamp having a minimum output of 1,000 microwatts per square centimeter in the field of exposure; or expose to bright sunlight for 3 hours. A greenish blue color begins to appear in the chloroform layer in about 15 minutes of exposure to the mercury vapor lamp. At the end of 30 minutes compare with standards containing known quantities of pure rotenone prepared at the same time in the same manner. When the rotenone sample is not in solution in a hydrocarbon base, concentrated hydrochloric acid may be used in place of the reagent described.

When the liquid insecticide contains pyrethrum and rotenone (not derris extract) in a refined kerosene base, proceed as follows: Prepare an extract of pyrethrum with refined kerosene. Add 1.8 kg. or 4 pounds of pyrethrum to 3.785 liters of 1 gallon of refined kerosene and allow to stand at least 2 days. Filter and preserve. Match the color of the insecticide approximately with that of the extract by diluting with refined kerosene. Prepare a choloroform solution of rotenone of suitable concentration. Use the diluted pyrethrum extract and rotenone solution in preparing the standards using the same amount of extract in the standards as insecticide used in the test. Proceed as above.

A second method of determination is as follows: To 5 cc. of an acetone solution containing from 0.1 to 2.0 mg. of rotenone per cc. in a glass-stoppered cylinder, add 5 cc. of an acetone solution of thymol (10 grams of thymol to 100 cc. of acetone), 0.1 cc. of 3 per cent hydrogen peroxide, and 5 cc. of concentrated hydrochloric acid. A reddish violet color appears within 30 seconds. After 1 minute place the glass container in a water bath at about 20° C., and at the end of 20 minutes compare with rotenone standards, similarly prepared at the same time. H. D. Rogers and J. A. Calamari. *Ind. Eng. Chem.*, Anal. Ed. 8, 135 (1936).

William Schwenk of Infallible Exterminating Co., Chicago, burned to death June 2nd when several cans of an inflammable exterminating fluid caught fire after the automobile in which he was riding sideswiped a street car and turned over.

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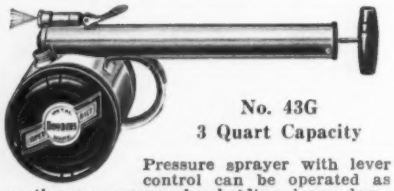

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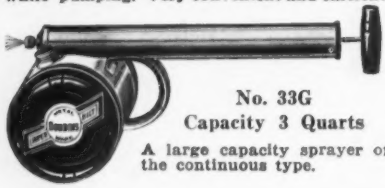

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NEWS . . . . . .

Insecticide Sales Campaign

Sinclair Refining Co., New York, is bringing out a new advertising campaign for Sinclair "P. D. Insect Spray." Over 200 newspapers will be used, featuring the cedar bouquet of the product. Federal Advertising Agency, Inc., New York, is handling the campaign.

Moth Concern Moves

Permanent Mothproofing Co., Kansas City, has moved from its old location at 4055 Broadway, to 117 Westport Road. Increased business caused this company to seek larger quarters and in consequence additional equipment has been added and more help employed.

Offers New Ant Killer

Bexley Laboratories, Bexley-Columbus, Ohio, are introducing a new ant killer under the name "Queen Ant Control". The product comes in a small round metal container and holds two types of thallium sulfate treated ant baits.

Offers Free Floor Wax

Dri-Brite, Inc., St. Louis, is currently offering a free trial can of its "Dri-Brite" liquid floor wax. A sample can is attached to the regular can, and when the purchaser buys a regular can, he may try the sample, and if it is not satisfactory he returns the regular size can and gets his money back.

F.T.C. Closes "Sib" Case

The U. S. Federal Trade Commission has issued an order closing its case against Strong, Carlisle & Hammond Co., Cleveland. The complaint charged unfair representations in the sale of a solution for household uses. Closing the case was ordered following the signing by the respondent of a stipulation approved by the Commission. The respondent company agrees to cease representing that its product called "SIB" will assure better health; is free from harmful chemicals; will sterilize objects without scouring and scrubbing by hand; that "SIB" is the purest, most effective and economical household germicide, antiseptic or deodorant, and other similar assertions.

Brenn on School Board

J. L. Brenn, president of the Huntington Laboratories, Inc., Huntington, Ind. and for many years active as a member of the Board of

Governors of the National Association of Insecticide & Disinfectant Manufacturers, was recently elected a member of the board of school trustees for three years by the city council of Huntington. Although a Democrat, Mr. Brenn was elected to the board by a Republican council from among six names considered for the honor. The *Huntington Herald-Press*, leading newspaper of that city and itself of Republican inclinations, in commenting upon Mr. Brenn's election in its leading editorial of June 10, stated in part: "There was plainly no partisanship in Mr. Brenn's election. . . . The body was apparently actuated solely by a desire of selecting a school board member who would contribute to the best possible administration of the city's schools." He served previously as a member of the school board some years ago.

Reilly Adds New Plant

Reilly Tar & Chemical Co., Indianapolis, has announced plans for the erection of a new $200,000 coal-tar distillation plant in Cleveland on property adjacent to the site of the Republic Steel Corp. plant on Independence Road, S. E. Cleveland. A twenty year contract has also been signed for the purchase of coal-tar produced by Republic Steel in the Cleveland district. Reilly Tar already operates fourteen plants at various points throughout the country including Chicago, Joppa and Granite City, Ill., Mobile, Seattle, Minneapolis, Newark, N. J., Norfolk, Va., Provo, Utah, Denver, Ohio, Fairmount, W. Va., and Chattanooga, Tenn.

Smith with Washburn

T. F. Washburn Co., Chicago, manufacturers of floor products for the jobbing trade, announces that Tom Smith is representing the company in New York. His address is 136 West 55th Street. Mr. Smith has been connected with the Washburn company for the past three years. He has had considerable technical experience in the Washburn plant and laboratory in addition to his sales work among sanitary supply houses.

F. O. Moburg Dies

F. O. Moburg, founder and president of Rex Research Corp., Toledo, Ohio, died there recently following a cerebral hemorrhage. He had been in ill health for the past year and had spent the winter recuperating in California. Mr. Moburg was one of the pioneers in insecticidal sprays, having first organized the Rex Spray Co. in 1896. Perhaps its best known product was "Fly-Tox". Late in 1929 reorganization plans were carried through, with the successor company taking the name of Rex Research Corp. Due to the failing health of its founder, affairs of the company for the past year have been under the active direction of H. W. Moburg, vice-president and sales manager. The business will continue under his management.

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MANY of the processes employed in the refining of coal tar products have been developed by the Koppers companies. A competent technical staff is constantly at work to introduce further process refinements and to insure the high quality of all Koppers products. The Koppers laboratories are abreast of all new developments in the field of coal tar products. Their services are at your command.

TAR ACIDS

CRESOL, U. S. P.

PHENOLS

CRESYLIC ACID

98% to 100% STRAW COLOR

TAR ACID OILS

NEUTRAL HYDROCARBON OIL

(For construction aud maintenance, Koppers also produces: Roofing, Waterproofing, Dampproofing, Creosote, Tar Base Paints and Coatings, and Tarmac for driveways, roads, pavements, etc.)

KOPPERS PRODUCTS COMPANY

KOPPERS BUILDING, PITTSBURGH, PA.

Offices: New York, Boston, Providence, Chicago, Birmingham

Plants:

Birmingham, Ala.; Buffalo, N. Y.; Chicago, Ill.; Follansbee, W. Va.; Fort Wayne, Ind.; Hamilton, O.; Kearny, N. J.; Milwaukee, Wis.; New Haven, Conn.; Providence, R. I.; St. Paul Minn.; St. Louis, Mo.; Swedeland, Pa.; Utica, N. Y.; Youngstown, O.

HUDSON

EVERYTHING THAT Goes Up . . .

That applies to fly sprays, too! But by and large, Mrs. America doesn't know the best way to rid the house of insects. That's why we're telling Hudson users to *spray up —not down* to get the best results with fly sprays—to make your product more effective.

The sprayer she uses has plenty to do with it, of course. And if it's a Hudson Fog you can be sure of the best results. It's the perfect little household sprayer that breaks fly oils into a fine fog that floats through the room and turns live insects into dead ones in a hurry. These are the features that make it a favorite with housewives that know their sprayers:

HUDSON FOG SPRAYER

HUDSON
FOG
Drip Cup
Vent to return any overflow to can.
Unusually large filler opening to permit filling direct from can or bottle.
Curved Syphon Tube to permit spraying into upper corners of room.

Our merchandising department is ready to co-operate with you to get better results and more sales for your insecticide. There's no obligation. Why not write us today?

●

H. D. HUDSON MFG. CO.

589 E. ILLINOIS ST. CHICAGO, ILL.

Holcomb 40 Years Old

J. I. Holcomb Manufacturing Co., Indianapolis, one of the largest manufacturers of cleaning materials and janitor supplies in the world, recently completed forty years in business. In the company plant which today occupies a square city block in Indianapolis, more than eighty per cent of the 400 items distributed by the firm are manufactured. Present sales cover all parts of the United States, two branches being maintained in New York and San Francisco. Warehouses are established in six leading cities. A staff of 150 salesmen covers the country. The company sells only to the industrial, institutional, and commercial trade, and makes no products for sale in retail stores. At the present time, its credit rating in Dun and Bradstreet is a half-million dollars.

J. I. Holcomb, present head of the firm, established the business in May, 1896, in Lafayette, Ind. with a capital of $180. Three persons constituted the company personnel at that time. Mr. Holcomb is still president of the firm. E. E. Martin, present general manager, is vice-president and has been associated with the company since 1913. Ray Holcomb, treasurer since 1923, and a brother of the president, has been connected with company sales since leaving school. Today he directs the finances and advertising. W. R. Hatton, present sales manager, has been associated with Holcomb since 1917. P. M. Goldrick, merchandise manager, dates his employment with the firm back to 1914.

The longest association with J. I. Holcomb in the business is that of Ira Anderson who has been superintendent for the entire forty years of the firm's existence. In addition, he is today secretary of the corporation. A number of the men under Mr. Anderson in the plant came with the company when it made its second move in 1905 from Sullivan, Ind. to Indianapolis. P. T. Downey is in charge of the purchasing department. W. E. Bennett is credit manager, and Ralph Boles is in charge of the shipping department, his employment dating back to 1904. L. Newburn, chief chemist, has been with the firm for about a year, succeeding H. W. Dietrich who retired because of illness. J. I. Holcomb is also president of the Holcomb & Hoke Manufacturing Co. of Indianapolis, manufacturers of brooms, brushes, and allied items, which firm, however, is not connected with the J. I. Holcomb Mfg. Co.

Top row, left to right: P. M. Goldrick, J. I. Anderson, and W. R. Hatton. Bottom row: E. E. Martin, J. I. Holcomb, and Ray Holcomb.

"Corvall's" Flea Killer

Corvall Laboratories, Detroit, are bringing out a new series of items, including a flea killer and dog shampoo, under the "Corvall's" brand name. They also consider plan to erect a new laboratory building for both experimental and production work.

Copeland Bill Dropped

The Copeland Bill (S-5), designed to regulate the advertising and sale of drugs, cosmetics and pharmaceutical products, failed of passage in the last minute rush of Congress to adjourn. The failure of passage resulted from a deadlock in conference, although the bill had passed both houses of Congress in slightly different form. The conferees could not agree on whether supervision of advertising would be entrusted to the Federal Trade Commission or the Food and Drug Administration, and it was the deadlock on this point that prevented passage. The measure which would have controlled such products in the sanitary products field as insecticides, disinfectants, medicinal soaps, etc., will probably receive early attention in the next Congress, it is believed.

New NAIDM Members

Clean Home Products Co., Chicago, has just been elected to active membership in the National Association of Insecticide and Disinfectant Manufacturers. A new associate member is T. F. Washburn Co., Chicago.

Abel Products Moves

Abel Products Co., exterminating concern, formerly at 4224 Fine Oak St., Dallas, Texas, has moved to new quarters at 4110 Ross St.

M. M. & R. Appoints Bonewitz

Magnus, Mabee & Reynard, Inc., New York essential oil firm, has recently appointed Bonewitz Chemical Co. as sole representatives in the states of Iowa and Nebraska. Paul W. Bonewitz, head of the newly organized firm bearing his name is well known in the Iowa and Nebraska district through his former connections in the drug industry. General offices will be maintained at 100 N. Third St., Burlington, Iowa, with branches at 414 E. Grand Ave., Des Moines, and 29th St. and First Ave., Council Bluffs, Iowa.

Uncle Sam Says:

We are specialists in Paradichlorobenzene Products, including

Deodorizing Blocks
Urinal Blockettes
Moth Preventives, etc.

A large variety of shapes and sizes to fill practically every requirement.

Write for descriptive circular and price list.

Metal Polish
Non-Rubbing Wax
Deodorizing Blocks
Urinal Cakes
Fly Sprays
Moth Preventives
Furniture Polish
Prepared Wax Polish
(Liquid and Paste)

UNCLE SAM CHEMICAL CO., INC.
Manufacturers for the Jobber
329 EAST 29th STREET, NEW YORK, N. Y.
Established 1915

Are you looking for a good odor at a minimum cost for your sprays, deodorants, hand soaps, polishes, deodorizing blocks, etc.? The following will solve your problem. They are powerful, pleasant and lasting.

SOMODOR	1 TO 5 LBS. 60c. 6 TO 25 LBS. 55c. 26 TO 100 LBS.. 50c.
VALUDOR	1 TO 5 LBS. 70c. 6 TO 25 LBS. 65c. 26 TO 100 LBS. 60c.
SOLODOR	1 TO 5 LBS. 75c. 6 TO 25 LBS. 70c. 26 TO 100 LBS.65c.
NARCISSE 150	1 TO 5 LBS. $1.50. 6 TO 25 LBS. $1.40. 26 TO 100 LBS. $1.30.
LILAC R. P. C.	1 TO 5 LBS. $1.50. 6 TO 25 LBS. $1.40. 26 TO 100 LBS. $1.30.

Write for Samples

RIVIERA PRODUCTS CO.
215 W. OHIO ST. CHICAGO
Headquarters in the Middle West for Perfume Oils, Waxes, Colors, etc.

UNEXCELLED PRODUCTS FOR JOBBERS AND BULK BUYERS

Most buyers that are familiar with KLEENWELL PRODUCTS depend on us to supply their complete requirements for all kinds of sanitary products. This unusual acceptance can mean just one thing—the KLEENWELL trademark guarantees quality of the highest order at the right price.

All our products are guaranteed as represented and are available under your own label if preferred. Write for descriptive price on any of the following items:

- Floor Maintenance Materials
- Liquid Gloss Wax (Self Polishing)
- Powdered Dance Floor Wax
- Gymnasium Floor Seal
- Pynex Liquid Floor Cleaner
- Soaps
- Liquid Soaps
- Hard Vegetable Oil Soap in Self-Mixing Drum
- Detergent Powders
- Dish Washing Compound
- Disinfectants
- Deodorant Blocks—Crystals
- Pine Oil Disinfectant
- Insecticides
- Red Sweeping Compound
- Bowl-Kleen-Liquid and Powder
- Pipe Solvent
- Furniture and Metal Polish

CHICAGO SANITARY PRODUCTS CO.
2526 CONGRESS ST. CHICAGO

Opens Wichita Branch

Radium Dye Co., 2107 Grand avenue, Kansas City, has opened a branch at Wichita, Kansas, where P. M. King has been named district manager. This firm manufactures and distributes an extensive line, including "Superior" polish, ant and roach exterminator, and "So-Easy" wax.

Pine Oil in Stock Sprays

Pine oil in cattle sprays increases the toxicity of pyrethrum extract in relation to the amount added. The toxicity of a 1 pound-per-gallon pyrethrum spray can be maintained by substituting 10, 15 or 25 per cent of pine oil for 0.25, 0.5 or 0.75 pound of pyrethrum, respectively. Pyrethrum-pine oil combinations, in a petroleum oil base, display the same rate of kill as pyrethrum alone. Pyrethrum-pine oil combinations possess a higher "knockdown" value than a spray containing pyrethrum alone of comparable mortality. Pine oil retards the rate of precipitation, change of color and loss of toxicity of pyrethrum sprays when exposed to sunlight. High-grade pine oils are more effective than those of low grade for combination with pyrethrum, in respect to both toxicity and the prevention of deterioration.

Both the knockdown and mortality produced by derris extract are increased by pine oil. Greater activation is effected than with pyrethrum. Derris-pine oil combinations exhibit the same rate of kill as derris alone. Significant mortality occurs in 24 hours. High-grade pine oils are more effective than those of low grade when combined with derris extract. The effect of pine oil upon the toxicity of rotenone and of derris extract is similar. Pine oil increases the repellence of pyrethrum and derris extracts in relation to the amount added. Allen M. Pearson. *Del. Agr. Expt. Sta., Bull.* **196,** 5-63.

Moth-proofing Agents

Chlorinated hydrocarbons of the benzene or naphthalene series are perhaps the chief compounds used in moth-proofing agents, such as a mixture of 1 part of parachloronitrobenzene and 4 parts of paradichlorobenzene in suitable solvents. The solvent might be an ethylene dichloride-carbon tetrachloride mixture. Synthetic waxes of the chloronaphthalene series are also believed to be suitable moth-proofing agents. They are soluble in chlorinated hydrocarbon solvents, and a wide range of commercial varieties is available, including the halowaxes, seekay waxes, and nibren waxes. A 0.5 per cent aqueous solution of sodium aluminum silicofluoride is also good. *Industrial Chemist,* **12,** 244 (1936).

View of the new plant of Fuld Brothers at Baltimore, recently occupied by the firm.

Polish Composition

A polishing composition is made by washing alizarin oil with caustic solution, emulsifying and mixing with mineral or vegetable oils, with the addition of kieselguhr and clayey lime. I. R. Morozov. Russian Patent No. 39,897.

Loss by Seil Method

A study of the Seil method for the determination of pyrethrins in mineral oil extracts of pyrethrum shows that there is a loss of pyrethrins during the steam distillation for the removal of perfume. This loss is due to volatilization with steam and to decomposition or other chemical change. The materials examined showed an approximate loss of 25 per cent of pyrethrins. J. J. T. Graham. *Ind. Eng. Chem.,* Anal. Ed. **8,** 222 (1936).

Insect Tear Gas

Shell Petroleum Corporation announces a new compound that acts like tear gas on insects, keeping them away all day, but not irritating animals or people. *Business Week,* May 16, 1936.

Extermo Products Moves

Extermo Products, formerly located at 4460 Montrose St., Chicago, is now in new quarters at 1731 North Hancock St.

Offer Free Floor Mops

O-Cedar Corp., Chicago, is offering to its grocery dealers two free "O-Cedar" floor mops with a $9.72 assortment of different sizes of "O-Cedar" self-polishing wax.

Test Toxic Wild Gourd

Tests on the insecticidal value of the wild gourd (Cucurbita foelidissina) are being conducted by the Citrus Experiment Station of the University of California, according to Forrest B. McLane, one of the first workers to investigate the toxic properties of this weed. Mr. McLane reports that when the dried and ground root was used on the larva of the Fuller's rose beetle there was a very definite repellent action, although the mortality was not high.

A NEW FINISH THAT DRIES IN AN HOUR

Just Wipe It On

FEDERAL ONE HOUR FINISH

The Finish That's DRY In An Hour

A BEAUTIFUL, LUSTROUS CLEAR FINISH

This is a finish of most excellent quality—lustrous and enduring with the additional features of easy application and one hour drying.

HAS PHENOLIC RESIN BASE RESISTS WEAR

Made with Phenolic Resin, this finish provides the most indestructible film for finishing furniture, floors, woodwork, fixtures, etc. It resists the action of alcohol, strong alkali, acid, hot and cold dishes, etc.

APPLIES SMOOTHLY — SPEEDILY JUST WIPE IT ON

Federal One Hour Finish may be perfectly applied with mop or rag—easily and quickly.

SPREADS FAR

The excellence and spreading qualities of Federal One Hour Finish result in the finest appearing, longest lasting finish at low cost.

WILL NOT CRACK OR PEEL

Due to its flexibility, this finish will not chip, crack or peel. It does not scratch white. It has many advantages for every user.

Send for full particulars and prices

FEDERAL VARNISH CO.
337 South Peoria St.
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PYRETHRUM EXTRACT

odorless—stabilized

Two Concentrations
20 to 1 5 to 1

From direct imported flowers, we manufacture pyrethrum extracts of standard strength in deodorized petroleum base,—and stabilized against deterioration. These extracts are sold at prices competitive with ordinary extracts.

Other HAMMOND Products

Pyrethrum Flowers—Granulated ready for percolation.
Rotenone Extracts—Standardized and stabilized against deterioration.
Rotenone-Pyrethrum Extracts—Various concentrates in combinations as required.

Ask us for further information.

HAMMOND
Paint & Chemical Co.
BEACON NEW YORK

The Chemistry of Laundry Materials

by D. N. JACKMAN

A discussion of materials used in the laundry, starting with water and going through alkalies, soaps, bleaches, starches, etc. The book contains valuable information on the chemistry of laundry materials, not stopping with the well-established products but discussing as well the newer detergents and assistants for scouring and washing, giving information on the so-called synthetic soaps and the other products which now form the great number of newer detergents. 240 pages, $2.50 per copy.

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254 West 31st Street New York City
List of other books on request

Attack Hypochlorite Claims

RECENT citing of a manufacturer of a hypochlorite bleach and disinfectant by the Federal Trade Commission has brought about an investigation of the situation by Robert F. Wilson of the Associated Grocery Manufacturers of America, whose offices are located at 205 East 42nd St., New York. The following bulletin on the subject was recently issued by the Grocery Manufacturers. All interested manufacturers are urged to study it and report their views on the subject to Mr. Wilson at the above address. It states:

"I deem the matter herein set forth of sufficient importance to all manufacturers of sodium hypochlorite to direct this memorandum to the entire trade so that I may, before making any appearance before the Federal Trade Commission, obtain the reaction of such manufacturers and determine upon a proper course of action.

Recently the Federal Trade Commission, after an ex parte examination, determined that one of the manufacturers of sodium hypochlorite must sign a cease-and-desist order or else stand the expense of a trip to Washington, examination, expenses and all the other incidentals necessary to defending an action brought by the Federal Trade Commission.

The facts and conclusions, with the name of the manufacturer involved deleted, as reached by the Federal Trade Commission are as follows:

"In the course and conduct of its business, as hereinbefore described, the respondent made, published, or caused to be published the following statements, claims, and representations to induce the purchase of its product:

'KILLS ODOR, GERMS, AND HELPS HEAL SCRATCHES.'

'---- is concentrated.'

'FOR TIRED OR SWOLLEN FEET.'

'HELPS HEAL ABRASIONS, BENEFICIAL IN TREATMENT OF ATHLETE'S FOOT.'

'Cuts and Scratches—Commonly used as a germicide in hospitals. For cuts and scratches, to promote quick healing without infection, use one part of ---- to three parts of water and apply to open cut. Do not apply to bandage.'

The respondent hereby admits:

That according to the weight of scientific authority ---- will not stop all odors or kill all germs including their spores and that its value in helping to heal scratches is limited to its effect as an antiseptic;

That ---- is not, accurately speaking, a concentrated solution of sodium hypochlorite;

That ---- is not a competent treatment or an effective remedy for all conditions responsible for swollen feet;

That according to the weight of scientific opinion, this product is not a competent treatment or an effective remedy for athlete's foot;

That the use of ---- in hospitals is not sufficiently extensive to justify the claim that it is 'commonly' so used.

The respondent hereby stipulates and agrees in soliciting the sale of its product in interstate commerce to cease and desist from representing directly or otherwise:

(a) That ---- kills germs, unless qualified to show that it does not kill all germs, including their spores;

(b) That this product will stop odors, unless qualified to show that it does not stop all odors;

(c) That ---- is concentrated;

(d) That ---- helps heal scratches, cuts and/or abrasions unless expressly limited to its effect as an antiseptic;

(e) By inference or direct statement, that this product is a competent treatment or an effective remedy for the condition commonly known as 'athlete's foot';

(f) That ---- is commonly used in hospitals.

and from making any other statements, claims or representations of like import.

The respondent further stipulates and agrees not to publish or cause to be published any testimonial containing any representation contrary to the foregoing agreement.

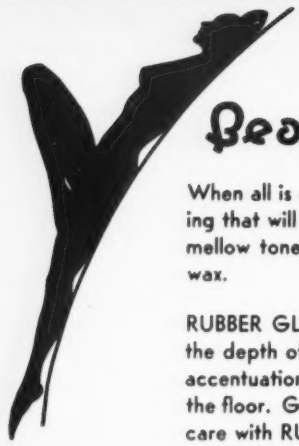
IT IS ALSO STIPULATED AND AGREED that if the said respondent should ever make, publish, or cause to be published any of the statements, claims or representations which it has herein agreed to cease and desist from making, publishing, or causing to be published, or should the said respondent ever resume or indulge in any of the practices in question, this stipulation of the facts may be used in evidence against it in any proceeding that the Commission may institute against the said respondent."

While I have not examined all of the labels of the manufacturers of sodium hypochlorite, nevertheless I believe I can safely say from an examination of those which I have that the cease-and-desist order would in some measure affect all manufacturers. It is my opinion that the action of the Commission is capricious and arbitrary and does not take into consideration the usual "Puffing" which is permitted in the sale of all products under common law.

I urge all manufacturers, whether or not members of AGMA, to indicate whether they will be affected by this cease-and-desist order, which if signed by one company will create a precedent and will eventually embrace all manufacturers.

It may be that the trade as a whole would be willing to consent to this type of cease-and-desist order. If it does, I would like to know that as a fact. If the trade is not willing to acquiesce in the power of the Federal Trade Commission to prevent the statements which have been and are being made, then and in that event I think the trade as a whole should combine for their own protection and bear the general burden as respects one manufacturer in the first instance rather than to have each separate manufacturer spend his time and money in combatting this action which should be handled in a unanimous fashion.

The manufacturer upon whom the stipulation was served has been given until July 1st to sign the stipulation or else stand the inconvenience of testimony, examination, etc. I will be able to obtain an adjournment of this deadline and have requested that I be given an opportunity to discuss this matter with the Federal Trade Commission on or about July 15th. I would appreciate receiving advice from all members of the trade before I confer with the Commission."



Beautifies

When all is said and done, there is nothing that will give a floor the same deep, mellow tones—the same rich beauty as wax.

RUBBER GLOSS floor wax is noted for the depth of its lustre and its marvelous accentuation of the color and pattern of the floor. Give your floors a few months' care with RUBBER GLOSS wax and you will experience the keen delight of seeing their beauty fully displayed.

. . . RUBBER GLOSS wax actually costs less to use than other waxes. Won't you telephone our local representative?

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PHILADELPHIA, PA.

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WHITE TAR
MOTH PREVENTION PRODUCTS

DISINFECTANTS

COAL TAR DISINFECTANTS—Coefficients 2 to 20 plus F.D.A. Method

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PINE OIL DISINFECTANTS

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CRESOL AND CRESYLIC ACID DISINFECTANTS

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CRYSTAL AND BLOCK DEODORANTS

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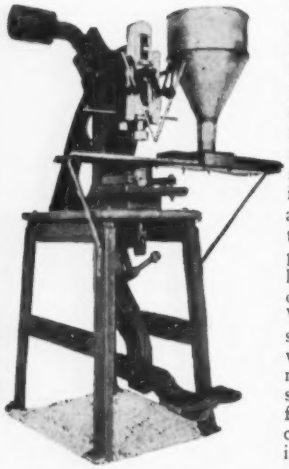
LIQUID INSECTICIDES

THE WHITE TAR COMPANY OF NEW JERSEY, INC.
PHONE KEARNY 2-3600
BELLEVILLE PIKE, KEARNY, N. J.

National Association of INSECTICIDE and DISINFECTANT MANUFACTURERS Incorporated 1914

Machine-Made DEODORANT CAKES and BLOCKS *are big sellers!*



Make your deodorant and moth cakes with this heavy pressure foot press by the cold process and save money while you are increasing sales. A smooth, even cake will sell better because of its improved appearance and will cost less to make because this press not only cuts labor but saves 5% of your raw material. Why not let us make some sample cakes with your own para, naphthalene, etc., and submit complete information regarding cost and manufacturing process?

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HAWTHORNE, N. J.

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PYRETHRUM FLOWERS

by **C. B. Gnadinger**

- Most recent developments in pyrethrum testing methods.
- Use of pyrethrum in live stock sprays and horticultural dusts and sprays.
- Control of pyrethrum decomposition by use of antioxidants.
- Up-to-date data on production and new sources.
- Three hundred new references to the recent literature.

$3.00 per copy

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MACNAIR-DORLAND CO.
254 West 31st St. New York City

Red Heart in New Quarters

Red Heart Chemical Co., disinfectants, Worcester, Mass., has moved from Kingsbury St. to 11 Crown St.

Measurement of Pyrethrins

A ten-page booklet has just been published by J. Ripert and O. Gaudin dealing with the measurement of the toxicity of pyrethrins 1 and 2. It is written in French and is an extract of a bulletin "Des Annales Des Falsifications Et Des Fraudes".

Cleaning Fluid

An organic cleaning liquid having a flash point above 80° F. consists of about 60 parts by volume of ethylene dichloride and 40 parts by volume of trichlorethylene. Carbide & Carbon Chemicals, Ltd. Canadian Patent No. 358,146.

Pyrethrum Flowers—2nd Edition

The second edition of C. B. Gnadinger's work on pyrethrum, first published in 1933, has just appeared in revised and expanded form. With the rapid changes that have been made in this field over the past few years, a new edition of the book was made necessary to bring the text into line with the most recent developments in pyrethrum testing methods, new applications in the insecticide field and new methods of handling the material in its various forms. Descriptions of fourteen chemical methods for assaying pyrethrum products are included in the new edition, and new biological assay methods are considered. Additional information on live stock sprays is presented, as well as reports on the use of the product in horticultural dusts and sprays. The decomposition of pyrethrum flowers and extracts in storage and control of decomposition by use of antioxidants are discussed. Data on production and new sources has also been brought up to date. In the bibliography more than three hundred new references have been added. 380 pages. 6½ x 9¼. Price of 2nd edition $5.00.

Sanitary Supply Ass'n Elects

The annual convention of the National Sanitary Supply Association, held at the Hotel New Yorker, New York, June 3, 4 and 5, closed with the election of Walter Hills, Masury-Young Co., Boston, as president for the coming year, succeeding Ellis Davidson of Ellis Davidson Co., New York. The new vice-president is D. C. Mervis, Cleaning Materials & Chemical Co., Pittsburgh. S. J. Bockstanz, Bockstanz Bros. Co., Detroit, was again elected treasurer and E. C. Kratsch, *Sanitation*, Milwaukee, secretary.

New members of the board of directors are: Ellis Davidson, the retiring president; R. L. Johnson, Nashville Products Co., Nashville; Simon Selig, Selig Co., Atlanta; J. J. Hentz, Procter & Gamble Distributing Co., Cincinnati; J. H. Johnson, Rubon Woodfinishing & Products Co., Kansas City; Harry Rightmire, J. B. Ford Co., Wyandotte; and J. H. Lawson, Federal Varnish Co., Chicago.

One of the important developments at the business sessions of the convention was the decision to merge the active and associate members of the organization into one group, all of whom would then be entitled to vote, hold office and exercise all the other privileges of active membership. An amendment to the by-laws will be necessary to make this change which will have to be voted on at a subsequent meeting.

A supply show was held in connection with the meeting at which the following firms were numbered among the exhibitors:

Palmer Products, Inc., Waukesha, Wis., soap dispensers, cleaners, deodorant crystals, toilet room fixtures, mops, etc. This booth was awarded first prize by the judges.

Victoria Paper Mills Co., Fulton, N. Y., toilet paper. Second prize award.

Windsor Wax Co., New York, complete line of waxes. Third prize.

Rubon Woodfinishing & Products Co., Kansas City, mops, dusters, dust cloths and polishes.

Fuld Bros., Baltimore, complete line of sanitary chemicals.

Cole Chemical Corp., L. I. City, deodorant blocs, polishes, disinfectants, etc.

H. D. Hudson Mfg. Co., Chicago, sprayers.

White Mop Wringer Co., Fultonville, N. Y., mopping equipment.

Clifton Chemical Co., New York, soaps, shampoos, waxes, disinfectants, deodorant blocs, etc.

T. F. Washburn Co., Chicago, floor finishes.

Breuer Electric Mfg. Co., Chicago, sprayers.

Armour & Co., Chicago, soaps, soap powders, etc.

R. M. Hollingshead Corp., Camden, N. J., soaps, polishes, insecticides, floor wax, cleaner, etc.

Paper Makers Chemical Corp., Milwaukee, soaps, washing powders, waxes, floor products, moth crystals, etc.

Liquid Insecticide

An insecticide effective as liquid or vapor consists of a mixture of *p*-dichlorobenzene, naphtha, trichloroethylene and pyrethrum extract. Gustav Algard. British Patent No. 440,536.

New Wax Specification

A new specification for liquid and paste floor wax has just been approved by the director of procurement, U. S. Treasury Department, Washington. Copies may be obtained through the Superintendent of Documents, U. S. Government Printing Office, Washington, at 10c each.

Thiocyanate Insecticide

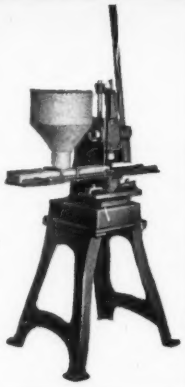
An insecticide contains as an active constituent an aromatic isothiocyanate in which the isothiocyanate radical is directly attached to the aromatic nucleus, mixed with another insecticide such as derris extract or rotenone. Kessler Chemical Corp. Canadian Patent No. 357,959.

for low cost *in* para block *manufacture*

These two practical machines are all you need to produce high quality para blocks or cakes. The small machine will thoroughly mix all ingredients. The large machine will compress the mixture into any shape dies can give.

In addition, the mixer can be used on other dry products such as roach powder, cleansers, bath salts, etc. It will also give a smooth, soft and velvety texture to creams.

The hand lever press has more power than cheap foot presses. Inexperienced operators can rapidly turn out fine looking blocks. Send us some of your material and let us show you some specimen cakes. The press will save from 10% to 20% over the hot process.



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We manufacture a complete line of high quality waxes for the jobbing trade, including no-rubbing liquid wax, regular type liquid wax, powdered wax, paste wax and also furniture polish. These products can be supplied in bulk, packaged under the Windsor label or with your own label which we supply.

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Manufacturers of

WAX PRODUCTS EXCLUSIVELY

Any emulsion

POLISH

can be improved with

The GAULIN two-stage HOMOGENIZER

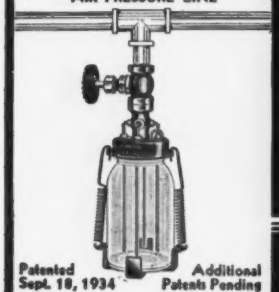
Whether it be oil polish, wax polishes, floor waxes, or any other emulsion, complete homogenization with the GAULIN Homogenizer will make a product which will work better and sell better. We will prove this to you if you will send us a sample of your product.

The same applies to insecticide and disinfectant emulsion products.

Manton-Gaulin Mfg. Co.

19 Charlton St. Everett, Mass.

FUMERAL PRESSURE SYSTEM CONNECTS TO STEAM OR AIR PRESSURE LINE

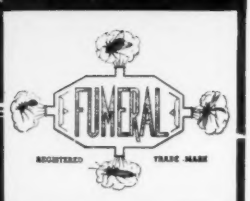


Patented Sept. 18, 1934 — Additional Patents Pending

FUMERAL PRESSURE SYSTEM

Does a Thorough Job..... INEXPENSIVE — EFFICIENT — ECONOMICAL

● The effectiveness of any good spray solution depends upon the efficiency of your spray equipment. Wet sprays are not efficient. It takes a minimum of 30 lbs. (steam or air pressure) to diffuse spray solutions. THE FUMERAL INSTANT DIFFUSER instantly charges the entire room. No insects, flies, cockroaches, ants, moths or germs have a chance to escape. ● Connects to any steam or air line. Turn on the valve and in 4 minutes the operation is completed. No electricity to fuss with. No moving parts. Nothing to get out of order. FUMERALS stay sold. Simple — Inexpensive — More Efficient and Most Economical. Anyone can install it. Various brands of insecticides, germicides, bactericides, deodorants, disinfectants and perfumes all work well in the FUMERAL INSTANT DIFFUSER.



FUMERAL COMPANY, RACINE, WIS.

Manufacturers of Stationary and Portable Diffusers

Sanitary Consulting Engineers

Offers New Flea Powder

General Insecticide Co., 4 East Forty-third street, Kansas City, manufacturer of insecticide products, opened up for business recently. The new concern has just placed on the market a flea powder under the trade name, "One-Dash." This company also manufactures an ant trap, rat killer and a roach powder. A. B. Peregoy heads the firm.

Rebukes Disinfectant Seller

Persons who lack training in the use and testing of disinfectants should not be allowed to engage in their manufacture in the opinion of Judge Lederle who recently passed sentence on Century Chemical Products Co. of Detroit for selling as a disinfectant its product "De-Germ" which upon test was found to be ineffective as a germ killer. The defendant was fined $300 and publicly rebuked by the Judge who pointed out that none of the officers of the company were trained in testing of disinfectants and they employed no chemist or other experienced person to make up for their deficiency. In passing sentence Judge Lederle remarked that the penalties prescribed by the law are not adequate to punish violations of this kind, as sale of a weak or worthless disinfectant for use in a public place constitutes a major health hazard.

This case was but one of fifteen criminal prosecutions recently terminated under the Federal Insecticide Act, involving fines totaling $1,805. These cases seem to indicate that the provisions of the Insecticide Act will in the future be enforced with greater diligence and that more serious penalties are in store for manufacturers who make false, fraudulent or unduly optimistic claims in labeling insecticides, disinfectants, deodorants, moth products, etc. In another case Termo Chemical Co., Chicago, was fined for misbranding a moth product which was shown to consist of 58 per cent common salt, and to be ineffective in moth control. German Chemical Co., Pittsburgh, was another concern fined, the offense being described as safe and non-poisonous a product which contained sodium fluoride and boric acid. Walter B. Stevens & Son, New York, were fined for shipping "Fleadex" under a label which neither named the inert ingredient, water, nor correctly stated the active ingredients in this product.

Dry Cleaning Solvents

The main advantage of chlorinated solvents in the dry-cleaning industry is the freedom from fire hazard with a corresponding reduction in insurance rates. The builders of petroleum solvent equipment are very much awake to the chlorinated-solvent situation, and are developing more efficient and safer machines with which they expect to stem the spread of chlorinated solvents. The improvement in safety of operation with higher flash petroleum distillates is already marked, and many believe that the use of chlorinated solvents has passed its peak. The improvement in dry-cleaning soaps, particularly the development of organic amine soaps which are more readily soluble in the solvent, has had an effect in improving dry-cleaning practice, although there are many who prefer the older soaps in the belief that they clean better. D. H. Killeffer. *Ind. Eng. Chem.* **28**, 640-3 (1936).

Lyptol Ltd. Moves

Lyptol (London) Ltd., British manufacturer of soaps, disinfectants, insecticides and allied sanitary products, has moved recently to new headquarters at 30-31 Richardson St., London, S E 1, England.

Derris Spray

The most efficient control of the raspberry beetle was obtained by the use of derris or barium silicofluoride sprays. Derris spray was more uniform in action than the fluoride spray. Two applications were sufficient, one during the opening of the buds and one when the petals were falling. Combinations of dusts and sprays gave inferior results. R. A. H. Gray and H. E. Brooks. *J. Roy. Hort. Soc.* **60**, 339-41.

Offer Waxes in Flake Form

A new development in the wax market has just been developed by Innis, Speiden & Co., New York, who are now offering both candelilla and carnauba waxes in flake form. The flakes are stated to be thin and light and more easily cut and saponified than other forms. They have a melting point of 159½° F. and are free from rosin, gums and impurities. The new flakes are being offered in one hundred fifty and two hundred pound bags.

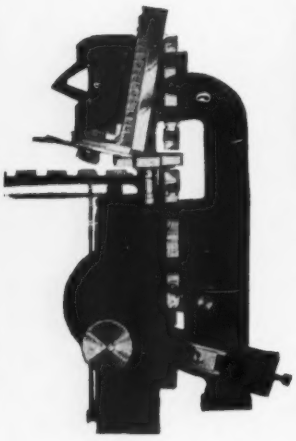
Starts Hendersonville Plant

Modern Way Produx Corp. has recently opened its new plant in Hendersonville, N. C., and has started production on "Bella Dura" auto polish. Production has previously been centered in Detroit.

End Price Discrimination

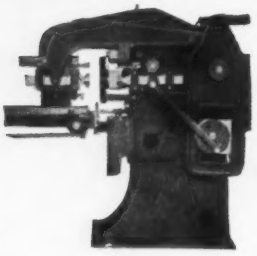
A composite price discrimination act made up of parts of the Robinson-Borah-Van Nuys and Patman Bills has just been signed by President Roosevelt. Among other things the act makes it unlawful for any person engaged in commerce to discriminate in price between different purchasers of commodities of like grade and quality, where the effect may be substantially to lessen competition or tend to create a monopoly, or to injure, destroy or prevent competition with any person who either grants or knowingly receives the benefit of such discrimination, or with customers of either of them. Differentials which make allowance only for differences in the cost of manufacture, sale or delivery resulting from the differing methods or quantities in which commodities are sold or delivered to purchasers are not prohibited. The Federal Trade Commission may after hearing fix quantity limits, and revise same if necessary, as to commodities or classes of commodities, where it finds that available purchasers in greater quantities are so few that differentials are unjustly discriminatory or promote monopoly.

Special Offerings of SOAP MACHINERY *Completely Rebuilt!*

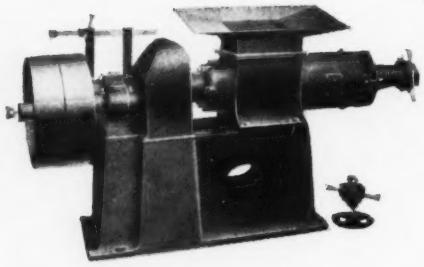


Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our own shops.

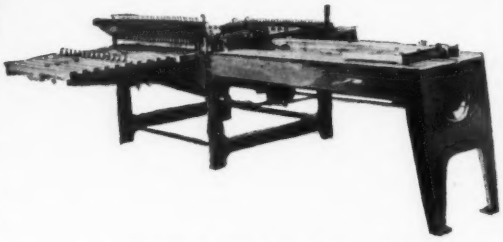
H-A SOAP MILL
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.



4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.

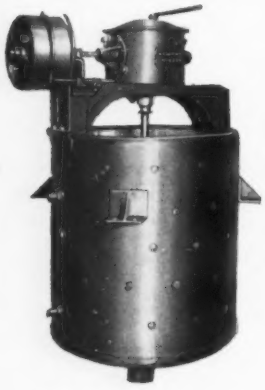


Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.



2 Automatic Power Soap Cutting Tables

NEW CRUTCHERS!



This Newman brand new, all steel steam jacketed soap crutcher. Will crutch any kind of soap. We also build another crutcher especially adapted for laundry soap in addition to other new soap machinery such as frames, cutting tables, etc. Send for complete list.

ADDITIONAL REBUILT SOAP MACHINERY

All used equipment rebuilt in our own shops and guaranteed first class condition.

- H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
- Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
- Empire State, Dopp & Crosby Foot Presses.
- 2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
- H-A 4 and 5 roll Steel Mills.
- H-A Automatic and Hand-Power slabbers.
- Proctor & Schwartz Bar Soap Dryers.
- Blanchard No. 10-A and No. 14 Soap Powder Mills.
- J. H. Day Jaw Soap Crusher.
- H-A 6, 8 and 10 inch Single Screw Plodders.
- Allbright-Nell 10 inch Plodders.
- Filling and Weighing Machine for Flakes, Powders, etc.
- Steel Soap frames, all sizes.
- Steam Jacketed Soap Remelters.
- Automatic Soap Wrapping Machines.
- Glycerin Evaporators, Pumps.
- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
- Perrin 18 inch Filter Press with Jacketed Plates.
- Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
- Day Grinding and Sifting Machinery.
- Schultz-O'Neill Mills.
- Day Pony Mixers.
- Gardiner Sifter and Mixer.
- Proctor & Schwartz large roll Soap Chip Dryers complete.
- Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.
- Day Talcum Powder Mixers.
- All types and sizes—Tanks and Kettles.
- Ralston and H.A. Automatic Cutting Tables.
- Soap Dies for Foot and Automatic Presses.
- Broughton Soap Powder Mixers.
- Williams Crutcher and Pulverizer.
- National Filling and Weighing Machines.

Plant of The Holman Soap Co., Chicago is offered for sale. Completely equipped modern factory.

Send us a list of your surplus equipment—we buy separate units or complete plants.

NEWMAN TALLOW & SOAP MACHINERY COMPANY

1051 W. 35th St.
CHICAGO

Our Forty Years Soap Experience Can Help Solve Your Problems

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Capable Sanitary Chemical Specialist—15 years' experience manufacturing disinfectants, insecticides, soaps, polishes, deodorants, etc., desires position as superintendent or chemist. Temporary work will be considered. Single, age 42, college graduate. Available at once. Address Box No. 769, care *Soap*.

Soapmaker and Chemist—with long experience making all kinds of soaps, seeks permanent connection. Address Box No. 770, care *Soap*.

Soapmaker and Chemist—whose past record and experience qualify him for meeting highest technical requirements, desires steady employment with progressive concern. Address Box No. 771, care *Soap*.

Soapmaker—Good worker, fully experienced in the making of laundry chips and bars; powders, oil soaps, textile soaps, shampoo bases, liquid soaps, etc. Also starting new plants. Address Box No. 767, care *Soap*.

Chemist and Soapmaker—Capable to take full charge in manufacture of textile, laundry and toilet soaps; also glycerine recovery. Analyze all materials. Address Box No. 774, care *Soap*.

Superintendent; man with twelve years' experience with two large soap manufacturers desires to make new connection. Present employment dates back seven years. Especially qualified to superintend production of all types of toilet soaps. Address Box No. 754, care *Soap*.

Floor Waxes—Chemist, expert in manufacture of floor waxes,—also have much research data,—open for part or full-time work with manufacturer. Can handle all emulsion and emulsification problems. Address Box 755, care *Soap*.

Oil Plant Superintendent—Man with many years experience as superintendent of plant refining, hydrogenating edible fats and oils, desires to make new connection where this experience will be valuable. Address Box No. 776, care *Soap*.

Complete Soap Plant

of large, old, established eastern manufacturer of national reputation. Includes modern plant and all late type equipment. Produced bar and chip laundry soaps, toilet soap and soap powders. Write for full details.

REBUILT SPECIAL OFFERINGS

1—Chilling Roll Unit 4' x 7'.
1—Jones Automatic Pin Die Press.
2—Houchin-Aiken Empire State Foot Presses.
1—2 way Soap Cutting Table.
10—100 Lb. Soap Frames.
20—1200 Lb. Soap Frames.
1—10A Blanchard Mill.
1—65 Gal. Dopp Jacketed Kettle.
1—Soap Chipper.
4—Filter Presses—10" to 24" Square.
2—Jacketed Vertical Crutchers.
2—Vertical Jacketed 3000 Lb. Kettles.
6—Glass Lined Kettles, 50 to 3000 Gals.
1—Soap Slabber.
1—Proctor 4 Fan Soap Chip Dryer.
3—Plodders; 6", 10" and 12".
4—3 and 4 Roll Stone Mills.

Send for Bulletin No. 101 giving full listings

We Buy Your Surplus Equipment for Cash, From Single Items to Complete Plants.

STEIN EQUIPMENT CORP.

426 BROOME STREET — NEW YORK, N. Y.
Phone: CAnal 6-8117 — Cable Address "MACHINEQUIP"

REBUILT SOAP MACHINERY

SPECIALS

Machinery from former plants of National Soap Powder Co., A. W. Barnes Soap Co., and Pennsylvania Soap Co.
1—Allbright-Nell 4'x8' Cooling Roll, with top feeder roll, scraping knife.
4—5000 lb., 1500 lb., 1000 lb., Jacketed Vertical Crutchers.
2—1500 lb. Horizontal Crutchers.
1—Steel Soap Kettle, 5' dia. x 10' high.
1—Houchin 400 lb. Amalgamator.
4—Houchin Soap Plodders, 8" and 10".
2—Rucchmann 4-roll inclined Granite Mills, 18"x24", motor driven.
1—Broughton 1200 lb. Soap Powder Mixer.
2—Tabor Soap Pumps.
4—Houchin 4 and 6-knife Chippers, 20".
1—Houchin Soap Foot Press.
1—Houchin 1500 lb. Power Slabber.
1—Houchin Hand Slabber.
2—Houchin 2-way Soap Cutting Tables.
1—Jones "A" Automatic Soap Press.

1—Proctor and Schwartz Soap Chip Dryer, steel frame, 7-section, 1—cooling section, complete with 5-roll P. & S. Mill. Located on Pacific Coast.

MISCELLANEOUS—Soap Frames, Kettles, Mixers, Pony Mixers, Powder Fillers, Labelers, Wrappers, Tanks, Pumps, Boilers, etc.

Send for Latest Bulletin.

CONSOLIDATED PRODUCTS CO., INC.
15-21 Park Row — New York, N. Y.
BArclay 7-0600
We buy your idle Machinery—Send us a list.

PALMER DISPENSERS

The new "TIPOWDER" dispenser (at right) is positive in operation, no springs or mechanical parts to get out of order. Tilting dispenser delivers predetermined quantity of soap—wasteful continuous flow absolutely impossible. Tamper-proof, easily cleaned. Metal parts chrome plated—black china, opal or clear crystal glass bowl.

Palmer SUPER-SERVER (left)—priced low, has no equal in value. Metal parts of stainless chrome alloy. One piece bracket in satin chrome-like finish. Valve parts easily removed for cleaning or replacement. Crystal glass decagon bowl, black enameled cap. Large 1-inch opening makes filling easy. Lowest priced push-in dispenser—yet neat, compact, durable.

Palmer PRODUCTS INC
WAUKESHA, WIS.
Adjacent to Milwaukee

Write for new catalog on complete Palmer line of soap dispensers; janitor and sanitary supplies, maintenance materials and equipment.

F. & S.

Quality Colors *for* TOILET SOAPS LIQUID SOAPS

TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.
205 FULTON STREET
NEW YORK, N Y.
Import—Manufacture—Export

SHAVING CREAM

TOOTH PASTE

In Bulk Or

Under Your Own Name in our special tubes and cartons. These are lithographed with a blank space for *YOUR* label. In any quantity from one gross up.

GEO. A. SCHMIDT CO.
INCORPORATED
Manufacturers of SOAPS *of Every Description*
236-238 West North Avenue
Chicago.

Ask for samples of above specialty bulk products.

Soap Sales—Man with many years' experience in sale of soaps in N. Y. Metropolitan area desires to represent Eastern manufacturers of toilet, laundry and flake soaps. Commission basis. Well-known among jobbers, chain buyers, etc. Address Box 756, care *Soap.*

Positions Open

Wanted—Man with experience in the merchandising end of private brand shampoos, disinfectants, insecticides, soaps, etc. Large firm is interested in getting in touch with man who has had experience selling private brands to department stores, chain stores, etc. Send full details to Box No. 772, care *Soap.*

Wanted—Salesman for waxes to institutions, janitor supply houses, etc. Liberal commissions on high grade products. Address Box No. 773, care *Soap.*

A Prominent Manufacturer of liquid soaps, disinfectants, deodorizing cakes, etc., has an opening for a dependable sales representative. Address Box No. 768, care *Soap.*

Miscellaneous

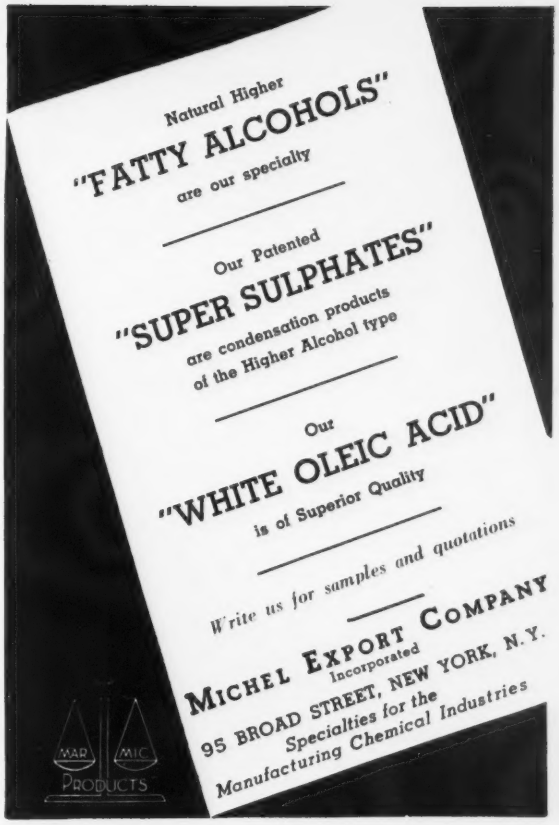
Floor Brushes — We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Distributors—We are manufacturers of metal, silver, stove, furniture polishes and no-rub wax. Also complete line of Bar Room cleaning materials. These can be supplied in bulk or packaged under our or your own label which we supply. The Slick-Shine Co., Inc., Newark, N. J.

Volcanic Ash—Mined and refined by Mid-Co Products Co., 238 Railway Exchange Building, Kansas City, Mo., operators of plants in Oklahoma and Kansas. Samples and prices on carlots on request.

Valencia Pumice—Something new in American Pumice Stone; Lump and Ground. It's clean, light color will please you. Barnsdall Tripoli Corp., Seneca, Mo.

For Sale—Respirators, Goggles, Thermometers and Hydrometers for every purpose. Write for prices. General Scientific Wks., 2620 N. 23rd St., Philadelphia, Pa.



Mailing Lists

IT IS the established policy of the publishers of SOAP not to supply mailing lists of the soap, sanitary products, and associated groups for checking, mailing, or any other purpose. Frequent requests for lists prompts the statement that this rule is without exceptions.

The direct mail service of SOAP is available for mailings from this office by regular advertisers *only*.

—*The Publishers.*

SOP-O-ZON
DISPENSERS

35 MODELS TO CHOOSE FROM

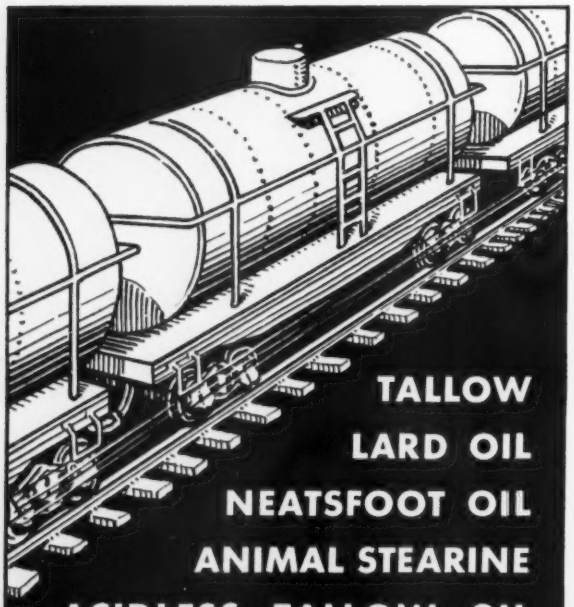
Write for Catalogue
Serving the Soap Manufacturer and Jobber only—We do not sell to the consumer.

BOBRICK MANUFACTURING CORPORATION
111-117 GAREY ST., LOS ANGELES
215 FOURTH AVE., NEW YORK CITY

Spot or Futures

TEASEED OIL

MURRAY
OIL PRODUCTS CO.
INCORPORATED
21 WEST ST., NEW YORK



TALLOW
LARD OIL
NEATSFOOT OIL
ANIMAL STEARINE
ACIDLESS TALLOW OIL

Prompt Delivery—Drums, Barrels, or Tank Cars.

INDEPENDENT MANUFACTURING CO.
Bridesburg P. O. Philadelphia, Pa.

High cost of Lavender and the Fine Quality of our product has won many fine friends for

Lavender L
Parento
at $4 per lb.

Write for your sample to - day

Compagnie Parento, Inc.
CROTON-ON-HUDSON, N. Y.
NEW YORK CITY DETROIT CHICAGO
LOS ANGELES SAN FRANCISCO
SEATTLE PORTLAND, ORE. TORONTO

Phenolic Compounds

A one per cent solution of pentacresol in 2 per cent soap solution at 20° C. gave high germicidal action toward Gram-positive bacteria such as the hemolytic streptococcus, but was low in efficacy against Gram-negative bacteria such as *E. coli*. A 1 per cent solution of the product in 50 per cent alcohol and 10 per cent acetone served as a much more effective stock solution. In the presence of 20 per cent horse serum, 1 per cent pentacresol was more effective as a germicide against Staph. aureus than six mercurials and a phenol derivative with which it was compared.

Mercarbolide tincture, in contrast to pentacresol, was most effective in germicidal action towards Gram-negative bacteria, the phenol coefficient with E. typhosa being over 1100 on the basis of the dry chemical. Different solutions of Mercarbolides showed marked bacteriostatic action toward Staph. aureus. Aqueous Mercarbolide solution showed higher germicidal action than the tincture towards *E. typhosa* and *E. coli*, but was not as effective as a bactericide against Staph. aureus.

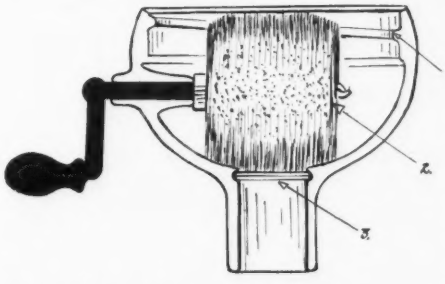
Mercresin was fairly uniform in its germicidal activity towards all of the Gram-positive and Gram-negative pathogens and non-pathogens examined at 20°, 30°, and 37° C. Short-time exposure tests showed Mercresin to be extremely rapid (almost instantaneous) in germicidal action against *Staph. aureus*. Mercresin showed no sign of deterioration over long periods of time. Cecil G. Dunn. *Ind. Eng. Chem.* 28, 609. 12 (1936).

STRAIGHT SHOOTING

Let us place our experience and knowledge of world markets at your disposal.

CHEMICALS
INSECTICIDES
OILS—WAXES

H. H. ROSENTHAL CO., INC.
25 EAST 26th ST. NEW YORK, N. Y.
Cable Address: RODRUG, N. Y.



1. Screw thread—varied containers
2. Rotary brush—agitates and divides
3. Adjustable valve.

POWDERED SOAP DISPENSER

Here is the simplest powdered soap dispenser ever devised—but at the same time it is sturdy, foolproof and attractive. It is unbreakable and rustproof, is easy to fill, requiring no special tools, and can be adjusted easily to discharge various quantities of soap. Capacity can be varied to suit requirements. Comes in satin finish or mirror high polish. Samples in satin finish shipped postpaid direct from manufacturer for 85 cents each. Mirror high polish for 95 cents each. Write for descriptive circular and quotations in quantity lots.

(Patented)

PRESTO MFG. CO.
4044 20th AVE. S. MINNEAPOLIS

MECHLING'S EST. 1869

PHILADELPHIA
CAMDEN, N. J.
BOSTON, MASS.

SILICATE OF SODA

MECHLING BROS·CHEMICAL COMPANY

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page, 144, for page numbers, *"Say you saw it in SOAP."*

ALKALIES

Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
H. H. Rosenthal Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Firmenich & Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Merck & Co.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Riviera Products Co.
Schimmel & Co.
George Silver Import Co.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

BULK AND PRIVATE BRAND PRODUCTS

Baird & McGuire, Inc.
Chemical Supply Co.
Chicago Sanitary Products Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Federal Varnish Co.
Flori Mothproofing Method
Franklin Research Co.
Fuld Bros.
E. A. Gerlach Co.
Harley Soap Co.
Koppers Products Co.
Kranich Soap Co.
Palmer Products
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Uncle Sam Chemical Co.
T. F. Washburn Co.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American-British Chemical Supplies
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Innis, Speiden & Co.
Mechling Bros. Chemical Co.
Merck & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
H. H. Rosenthal Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)
American-British Chemical Supplies
Baird & McGuire, Inc.
Barrett Co.
T. G. Cooper & Co.
Innis, Speiden & Co.
Koppers Products Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Pylam Products Co.

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Riviera Products Co.
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George Silver Import Co.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

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Ertel Engineering Corp. (Filters, Mixers, Bottle Fillers)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Manton-Gaulin Mfg. Co. (Homogenizer)
Mixing Equipment Co. (Mixers)
Package Machinery Co. (Packaging)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Stokes & Smith Co. (Packing Machinery)
Western Precipitation Co. (Multiclones)

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein-Brill Co.
Stein Equipment Corp.

MISCELLANEOUS

American Colloid Co. (Bentonite)
Anchor Cap & Closure Corp. (Metal Caps)
T. G. Cooper & Co. (Waxes)
Dobbins Mfg. Co. (Pails, Mop Wringers, etc.)
General Chemical Co. (Fluorides)
General Naval Stores Co. (Pine Oil-Rosin)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants and Waxes)
Merck & Co. (Lanolin)
Pylam Products Co. (Lathering Agent)
Rohm & Haas Co. (Insecticide Base)
Sennewald Drug Co. (Rat and Roach Paste)

OILS AND FATS

T. G. Cooper & Co.
Eastern Industries
Independent Mfg. Co.
Industrial Chemical Sales Co.
Leghorn Trading Co.
Michel Export Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
Wecoline Products Co.
Welch, Holme & Clark Co.

PARADICHLORBENZENE

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E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Merck & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
H. H. Rosenthal Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING COMPOUNDS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Felton Chemical Corp.
Firmenich & Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Riviera Products Co.
Schimmel & Co.
George Silver Import Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

PETROLEUM PRODUCTS

Atlantic Refining Co.
O'Connor & Kremp
Sherwood Petroleum Co.
L. Sonneborn Sons.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract, Derris Products

Derris, Inc.
Hammond Paint & Chemical Co.
S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.
H. H. Rosenthal Co.
Sherwood Petroleum Co.

SOAP DISPENSERS

Bobrick Mfg. Co.
Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Products
Presto Mfg. Co.

SODIUM SILICATE

General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

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Breuer Electric Mfg. Co.
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Getz Exterminators
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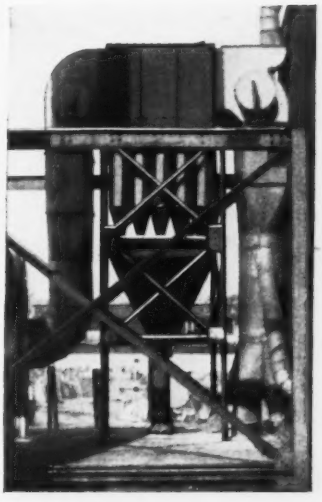

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